Analysis of the Economic Contribution of the Northern Alberta Development Council Region to Alberta and Canada

Submitted to

Northern Alberta Development Council

September 5, 2003

By

GTS Group International

In association with

Activation Analysis

November 2003

Northern Albertans know that the development of resources in the North have a significant impact on the Albertan and Canadian economies. Northern Alberta has tremendous petroleum, forestry and agricultural resources.

The Northern Alberta Development Council (NADC) commissioned the report entitled, Analysis of The Economic Contribution of The Northern Alberta Development Council Region to Alberta and Canada, to identify how the North affects the economy of the rest of Alberta and the Canada. The NADC members thank the consulting team for their work in preparing this report.

I encourage all leaders of private and public organizations to carefully consider the report's implications of Big Numbers, Big Contribution, and Big Opportunities. All Albertans need to be aware of Northern Alberta's impact on the economy and ensure that this dynamic source of Provincial wealth continues to flourish. Please remember that the report discusses the primary impacts only. Secondary and tertiary impacts are not included but also represent a significant level of economic contribution to Alberta and Canada.

The NADC has identified key points presented in the report, as part of a two-page summary. The report is intended to stimulate discussion on priorities for the development of Northern Alberta and to develop recommendations for action to turn these into realities. There are still challenges to be addressed in order for the region and the Province of Alberta to fully realize the potential of northern development.

I look forward to reviewing your comments.

Yours very truly,

Gary Friedel

Gary Friedel
Chair
Northern Alberta Development Council
MLA for Peace River

105-05329/

DISCLAIMER

The study, on which this report is based, was funded by the Northern Alberta Development Council.

The responsibility for the contents of this report is the consultant's alone. The views, statements and conclusions expressed do not necessarily reflect the views of the Northern Alberta Development Council or those who assisted during the course of this study.

Big Numbers - Big Contributions - Big Opportunities

"Northern Alberta constitutes a major engine of economic growth and development for Canada and for Alberta. However, the impact of the Region's economic contribution has never previously been fully documented and acknowledged."

– Gary Friedel, MLA Peace River and Chair of the Northern Alberta Development Council.

The Northern Alberta Development Council (NADC) commissioned the report Analysis of the Economic Contribution of the Northern Alberta Development Council Region to Alberta and Canada, which was prepared by GTS Group International in association with Activation Analysis. The report clearly demonstrates the importance of the NADC Region to Alberta and to Canada and that this significant contribution to the economy will continue in the foreseeable future.

The report found that Northern Alberta makes the following **direct contributions*** to:

GOVERNMENT REVENUES

- ✓ More than $3.7 billion to Alberta Government revenues for 2001-02. This amount is 17% of the $21.9 billion in total revenues of the Alberta Government.
- ✓ 17% in 1999 and 28% in 2001 of Alberta Government revenues from personal income taxes, corporate income taxes, and non-renewable resource revenues.
- ✓ $2.5 billion to Federal Government revenues for 2002. This amount is 13% of the $19.9 billion in total Federal Government revenue from Alberta.

EXPORTS

- ✓ $16.1 billion worth of northern goods accounted for one-third of Alberta's international commodity exports in 2002.
- ✓ $5.3 billion, or one-quarter of Alberta's inter-provincial exports in 2001, came from Northern Alberta.

*** Northern Alberta's total contribution is actually higher as the direct contribution figures do not include employment, value-added processing and investment that takes place outside of the NADC Region as a result of the development of northern resources.**

Northern Alberta - Rich in Natural Resources

Northern Alberta will continue to attract vast amounts of investment in the coming decade, particularly in the oil sands. The Northern Alberta Development Council (NADC) Region encompasses 60% of Alberta's landmass and is home to approximately 280,000 people, 9% of the provincial population and 51% of Alberta's Aboriginal population.

KEY INDUSTRIES

Oil and Gas: Northern Alberta produces 37% of Alberta's natural gas and 52% of Alberta's oil. Alberta Energy recently reported (September 2003) that the NADC Region's production of synthetic crude and bitumen averaged 740,000 barrels per day in 2002, with production expected to rise to 1.9 million barrels per day by 2010.

Forestry: Ninety percent of the province's potentially productive forests are in Northern Alberta. In 2002, the NADC Region exported $2.1 billion of forest products, 75% of the province's total. There is definitely an opportunity for more value-added initiatives in forestry to take place in Northern Alberta.

Agriculture: Agriculture exports from the NADC Region in 2002 included $280 million of crops, 19% of Alberta's total, and $41 million of livestock, 5% of the province's total. Northern Alberta's livestock and other agricultural products such as honey production can be considerably expanded.

Tourism: Almost 1.5 million visitors came to Northern Alberta in 2001 generating over $251 million in revenues. This emerging industry has considerable potential.

How Does This Affect Me?

OPPORTUNITIES

Jobs, Materials and Services: Investment in Northern Alberta creates a large demand for construction materials, labour, machinery and equipment, not only in the NADC Region but for the rest of Alberta, Canada and the world. It is estimated that every $100 million invested in the NADC Region creates $64.1 million demand for construction materials and labour in Alberta and $35 million demand for machinery and equipment ($5.8 million in Alberta, $2.9 million in the rest of Canada, and $27 million in the rest of the world).

Investment in Northern Alberta is forecasted to reach about $11 to $12 billion a year from 2004 to 2008, of which about $5 billion each year will be invested in the oil sands. This investment will create about $8.5 billion demand for construction materials and labour and $3.3 billion demand for machinery and equipment each year.

These figures point to the importance of the continued development of the oil sands to other parts of Alberta and the opportunities to increase Alberta's share in the production of equipment.

CONCLUSIONS

All Albertans need to be aware of Northern Alberta's impact on the economy of Alberta and Canada. The NADC trusts that this report will increase the awareness of Northern Alberta's contributions to the economy, and that it will encourage collaborative efforts that will ensure that this dynamic source of Provincial wealth continues to flourish.

Analysis of the Economic Contribution of the Northern Alberta Development Council Region to Alberta and Canada

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Executive Summary

The Northern Alberta Development Council Region (the NADC Region) constitutes a major engine of economic growth and development for Canada and for Alberta. This report provides extensive details about the direct contribution of the NADC Region to the economy of Alberta and to the economy of Canada. It provides sources of actual statistics; and methodologies and assumptions for estimations and forecasts where applicable.

The following summary highlights the results of the analysis of the economic contribution of the NADC Region. It clearly demonstrates the importance of the Region to Alberta and to Canada; and how its significant contribution to the economy will continue over the foreseeable future.

In this report, economic contribution of the NADC Region includes direct economic contribution only and does not include indirect economic contribution. For example, a company in the NADC Region makes direct economic contribution by selling its products. At the same time, the company makes indirect economic contribution by purchasing goods and services from other companies as input for its own production and by paying wages and salaries to its employees who in turn spend the wages and salaries on purchasing goods and services from other companies. But these indirect economic contributions are not included in this report.

- With 60% of Alberta's geographic area and only 9% of Alberta's population, the NADC Region's natural wealth, particularly in the oil sands, will continue to attract vast amounts of investment in the coming decade.
- The per capita economic contribution of the NADC Region to Alberta has been consistently higher than that of the rest of Alberta.
- Exports are a key indicator of economic contribution and the NADC Region accounted for nearly one-third of all of Alberta's international exports in the year 2002, over $16 billion.
- In addition, interprovincial exports from the Region were $5.3 billion in 2001, accounting for one-quarter of Alberta's interprovincial exports that year.
- The importance of the oil and gas sector is demonstrated in the fact that 81.4% of exports from the Region were crude oil, natural gas and natural gas liquids in 2002.
- Other sectors remain strong also. Agriculture exports from the Region, for example, constituted $321 million or 19.1% of the total Alberta crop exports in 2002.
- Primary forest products are a strong part of the Region's manufacturing sector and a major economic contributor with $2.1 billion in exports in the year 2002. This accounted for 74.9% of the total Alberta exports of primary forest products.
- Investment is a key indicator of economic contribution. In the year 2002, investment of $11.9 billion was made in the NADC Region, or 28.6% of all of the investment made in Alberta.
- Investment has been forecast over the next five-year period with the result that $58.8 billion new investment is expected in the NADC Region to 2008, maintaining its preeminence in the Alberta economy.

- The NADC Region generates jobs and employment earnings. In addition to $5.0 billion (in 2001) in employment earnings for persons living in the Region, jobs are also created at corporate offices in other parts of the province.

Summary of Direct Economic Contribution of the NADC Region

	Year	$ Value Billions	Per Capita Dollars	% of Alberta Total
Annual International Exports	2002	$16.1	$57,300	32.7%
Annual Interprovincial Exports	2001	$ 5.3	$19,400	24.8%
Annual Investment	2002	$11.9	$42,400	28.6%
Five-year Forecast of Investment for the NADC Region	2004-2008	$58.8		27.7%

- Another important economic contribution is the contribution from the Region to the revenues of the provincial and federal governments. Personal and corporate income tax and non-renewable resource revenue constituted $2.9 billion for the Alberta government in fiscal 2003, 22.8% of all provincial government revenue. This is a very significant contribution to support provincial programs and services, particularly given the fact that the NADC Region comprises just 9% of Alberta's population.

- The last year of available data for federal revenues from the NADC Region shows a contribution of $2.7 billion for the year 2000, or nearly 13% of all of Alberta's contribution to federal revenue.

- The large industrial assessment base in the Region results in lower user fees and sales of goods by municipal governments, as well as a higher per capita property tax, than the rest of the province.

Summary of Direct Economic Contribution to Government Revenue of the NADC Region

	Year	$ Value Billions	Per Capita Dollars	% of Alberta Total
Contribution to Alberta Government Revenue (personal income tax, corporate income tax, and non-renewable resource revenue)	Fiscal 2002	$2.9	$10,290	22.8%
Contribution to Federal Government Revenue	2000	$2.7	$ 9,900	12.9%
Contribution to Municipal Government Revenue	2001	$0.4	$1,632	6.2%

1.0 Introduction

Background

The Northern Alberta Development Council Region (the NADC Region) covers about 60% of Alberta's land but shares only about 9% of the population in the province. Its vast area has been a major centre of resource-based industries such as primary agriculture, forest products industries, conventional and non-conventional oil exploration industries, and natural gas exploration industries.

As Alberta's economy heavily depends on exports and investment for its growth, we know intuitively that the NADC Region has tremendous economic significance in Alberta. However, economic statistics and indicators have not been estimated specifically for the Region. Furthermore, it is not easy to estimate the economic contribution of the NADC Region to the rest of Alberta, the rest of Canada and the rest of world. Most economic statistics are collected either at a national or provincial level and very few statistics are available at a municipal or regional level.

Key economic indicators that are generally used to estimate a regional contribution to the economy include the value of exports, the level of investment, the purchase of goods and services, employment earnings and tax contributions.

This report presents a set of statistics that will show the level of economic contribution of the NADC Region. Regional statistics were used as much as possible. When regional statistics were not available, estimates of the NADC Region's share of the provincial total were made by relating the provincial total to regional indicators that are closely associated with the provincial total.

The contribution of the NADC Region to Alberta and Canada has been presented in this report as follows:

- Economic contribution to Alberta's trade, both international and interprovincial
- Economic contribution to investment in Alberta
- Economic contribution to goods and services purchased by firms in the NADC Region, including those purchased in the process of investment in the NADC Region
- Economic contribution of firms in the NADC Region to employment earnings
- Economic contribution to the revenues of municipal governments in the NADC Region, the Government of Alberta, and the Government of Canada
- By way of summary, a list of indicators that show the relative size of economic contribution of the NADC Region

In this report, economic contribution of the NADC Region includes direct economic contribution only and does not include indirect economic contribution. For example, a company in the NADC Region makes direct economic contribution by selling its products. At the same time, the company makes indirect economic contribution by purchasing goods and services from other companies as input for its own production and by paying wages and salaries to its employees who in turn spend the wages and

salaries on purchasing goods and services from other companies. But these indirect economic contributions are not included in this report.

Appendix A will contain all statistical tables that have been compiled for this study. Estimation and forecasting methods are briefly described in each section, but will be fully explained in Appendix B.

Key findings

The Northern Alberta Development Council Region (the NADC Region), with about 60% of Alberta's land but with only about 9% of Alberta's population, has been a major engine of economic growth and development of the province.

The NADC Region will remain as a major engine of the provincial economy as a vast amount of investment, particularly in oil sands, is expected to take place in the NADC Region in the future.

Economic contribution of the NADC Region to Alberta and Canada has been greater than that of the rest of Alberta on a per capita basis, particularly for exports and investment.

Economic contribution of the NADC Region to Alberta will remain greater than that of the rest of Alberta on a per capita basis in the future.

Estimates of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Economic Contributions	Year	Total Contributions ($ Billions)			Value Per Person ($ Thousands)		
		NADC Region	Rest of Alberta	NADC as % of Alberta	NADC Region	Rest of Alberta	Alberta Average
International exports	2002	16.1	33.0	32.7	57.3	12.2	16.4
Interprovincial exports	2001	5.3	16.0	24.8	19.4	6.1	7.3
Investment	2002	11.9	29.6	28.6	42.4	10.9	13.9
Revenue of Alberta government	2003*	3.8	18.8	16.7	13.4	6.9	7.6
Revenue of federal government	2000	2.7	18.2	12.9	9.9	7.0	7.3

Sources: Alberta statistics are actual and others are estimates by GTS Group International
* The year ending March 31, 2003.

Forecasts of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Economic Contributions	Year	Total Contributions ($ Billions)			Value Per Person ($ Thousands)		
		NADC Region	Rest of Alberta	NADC as % of Alberta	NADC Region	Rest of Alberta	Alberta Average
International exports	2008	18.9	38.1	33.1	62.2	13.0	17.6
Interprovincial exports	2008	4.9	14.5	25.4	16.3	4.9	6.0
Investment	2008	12.1	31.5	27.7	39.8	10.8	13.5
Revenue of Alberta government	2006*	3.2	18.8	14.4	10.4	6.7	7.0
Revenue of federal government	2008	2.7	19.1	12.4	8.9	6.5	6.8

Sources: Alberta statistics are actual and others are estimates by GTS Group International
*The year ending March 31, 2006.

2.0 NADC Region's Contribution to Alberta's Exports

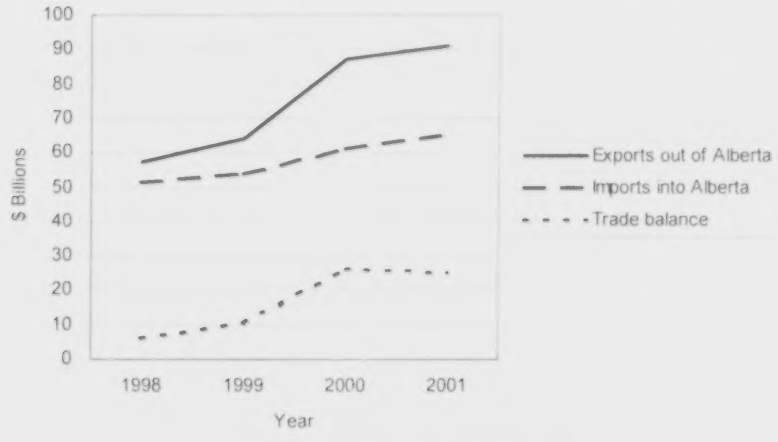
2.1 Alberta's Trade Balance

Alberta depends heavily on international and Interprovincial trade to support its economic growth.

In 2001, Alberta exported $91 billion of goods and services to other countries and $32 billion to other provinces; while at the same time Alberta imported $66 billion of goods and services from other provinces and other countries combined.

Alberta enjoys a positive trade balance. From 1998 to 2001, Alberta's trade surpluses increased from $6 billion in 1998 to $25 billion in 2001. Trade surpluses contributed to an increase in the wealth of people of Alberta and helped to support economic growth. Higher international commodity prices contributed to the rapid increase in Alberta's trade surpluses in recent years.

Alberta's Interprovincial and International Trade



Source: Alberta Finance, *Alberta Economic Accounts*.

2.2 NADC Region's Contribution to Alberta's International Exports

The NADC Region is a major producer of agricultural products, oil and natural gas, and forest products in the province. These industries in the NADC Region are highly export-oriented and have been major contributors to Alberta's international exports.

Agriculture

The NADC Region is a major exporter of agricultural products in Alberta.

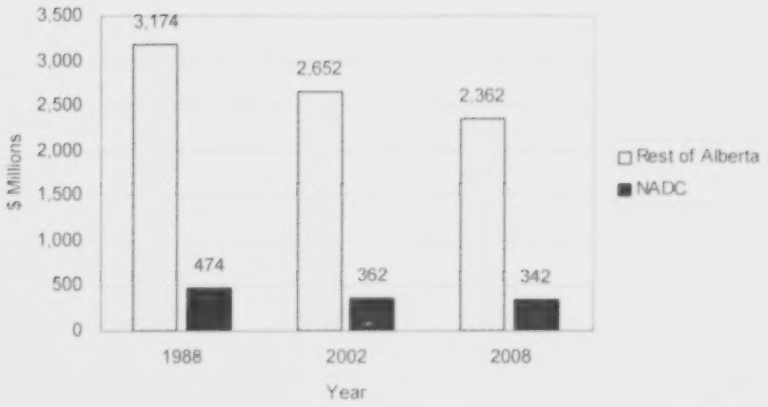
In 2002, the NADC Region exported $321 million of agricultural products:

- **$280 million of crops (19.1% of Alberta total) and**
- **$41 million of livestock (5.3% of Alberta total).**

In 2008, the NADC Region is forecast to export $308 million of agricultural products:

- **$274 million of crops (19.1% of Alberta total) and**
- **$34 million of livestock (5.3% of Alberta total).**

International Exports: Agriculture



Source: Alberta Economic Development, *Alberta International Trade Review* and estimates and forecasts by GTS Group International.

Major agricultural products in the NADC Region include wheat, barley, canola, alfalfa and hay, cattle and calves, and pigs. For each product, the value of exports from the NADC Region was estimated for 1998 to 2002 by allocating Alberta's exports by the NADC percentage of crop acreage or head of animals from the *2001 Census of Agriculture*.

The value of exports depends both on price and quantity. Forecasts beyond 2002 were

made by extending past trends in the value of exports in constant dollars into the future and adjusting them for 2002 prices. Therefore, forecasts are expressed in 2002 prices.

Energy and Non-Energy Mineral Products

The NADC Region is a major producer of natural gas and natural gas liquids, conventional crude oil, and non-conventional crude oil. They are Alberta's major export products in both international and interprovincial trade.

The NADC Region has been a major source of crude oil and natural gas exports from Alberta. Its role as an exporter of crude oil will increase in the future as synthetic crude oil and bitumen production from oil sands in the NADC Region is expected to increase significantly.

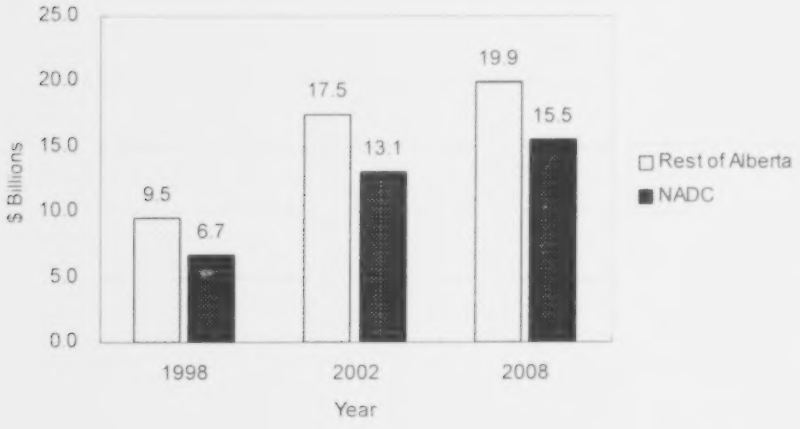
In 2002, the NADC Region exported $13.1 billion of energy mineral products:

- **$6.6 billion of crude oil (52.4% of Alberta total), and**
- **$6.4 billion of natural gas and natural gas liquids (37.0% of Alberta total).**

In 2008, the NADC Region is forecast to export $15.5 billion of energy mineral products:

- **$8.7 billion of crude oil (53.7% of Alberta total), and**
- **$6.8 billion of natural gas and natural gas liquids (36.2% of Alberta total).**

International Exports: Energy and Non-Energy Mineral Products



Source: Alberta Economic Development, *Alberta International Trade Review* and estimates and forecasts by GTS Group International.

For each major product of exports, the value of exports from the NADC Region was estimated for 1998 to 2002 by applying the NADC Region's percentage of production in Alberta to Alberta's total exports. These percentages were calculated from Alberta Energy's statistics of monthly production of energy mineral products in the NADC Region.

The value of crude oil and natural gas exports have been subject to wide fluctuations in international prices and may encounter such fluctuations in the future. Forecasts for the NADC Region's exports are based on the assumption that international prices in 2002 will continue to the year 2008. Prices were not exceptionally high in 2002 (US$24.17 per barrel for oil and Cdn$3.94 per thousand cubic feet for natural gas), so this assumption is reasonable for forecasting the value of exports.

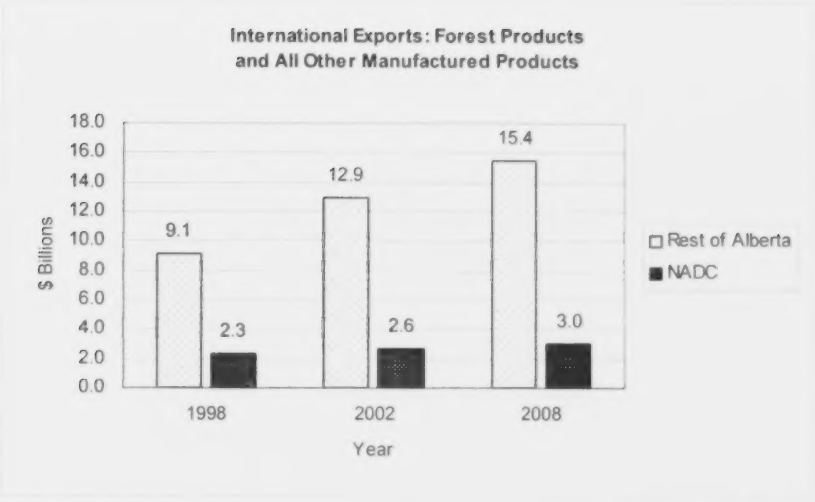
In 2000, the NADC Region produced 600,000 barrels/day (94,800cubic meters/day) of synthetic crude oil and bitumen from oil sands. This represented 40% of Alberta's and 29% of Canada's total liquid petroleum production. In 2002, synthetic crude oil and bitumen production increased to 667,000 barrels/day (105,400 cubic meters/day), or 48% of Alberta's total liquid petroleum production.

According to a forecast by Alberta Energy and Utilities Board, the NADC Region is expected to produce 1,197,000 barrels/day (189,500 cubic meters/day) of synthetic crude oil and bitumen by 2005. This will be 63% of Alberta's total liquid petroleum production.

Manufacturing – primary forest products

The NADC Region is a major producer of lumber, paper, wood pulp and panelboard in the province. Exports of primary forest products (lumber, pulp and paper, and panelboard) accounted for a major portion of exports of manufactured products from the NADC Region.

- **In 2002, the NADC Region exported $2.1 billion of forest products (74.9% of Alberta total).**
-
- **In 2008, the NADC Region is forecast to export $2.3 billion of forest products (75.1% of Alberta total).**



Source: Alberta Economic Development, *Alberta International Trade Review* and estimates and forecasts by GTS Group International.

According to Alberta Forest Products Association's *Alberta Forest Products Industries - Overview of Economic Impact* (November 2001), the NADC Region's percentage of Alberta's total production capacity in 2001 was:

- Sawmill 71.8%
- Pulp and paper 79.6%
- Panelboard 32.5%

Forest products industries play a dominant role in the manufacturing sector of the Region. According to Statistics Canada's *Manufacturing Industries of Canada*, their percentage share of the value of shipments of manufacturing industries in the NADC Region was:

- 63.6% in 1998
- 50.2% in 1999

The NADC Region's percentage share of production capacity in Alberta was used to allocate Alberta's total exports to the NADC Region for 1998 to 2002. For forecasts beyond 2002, Alberta trends from1996 to 2002 were extended into the future and the NADC Region's share was applied.

Manufacturing - All Other Manufactured Products

The NADC Region has a strong presence in Alberta's international exports of primary forest products.

When forest products and other manufactured products are combined,

- **the NADC Region exported $2.6 billion of manufactured products in 2002 (17.1% of Alberta total), and**
- **the NADC Region is forecast to export $3.0 billion of manufactured products in 2008 (16.1% of Alberta total).**

In 1999, the NADC Region shared 4.2% of the value of shipment of manufactured products (excluding primary forest products) of Alberta. By applying this percentage to Alberta's total exports of manufactured products, the NADC Region's exports of manufactured products (excluding primary forest products) were estimated.

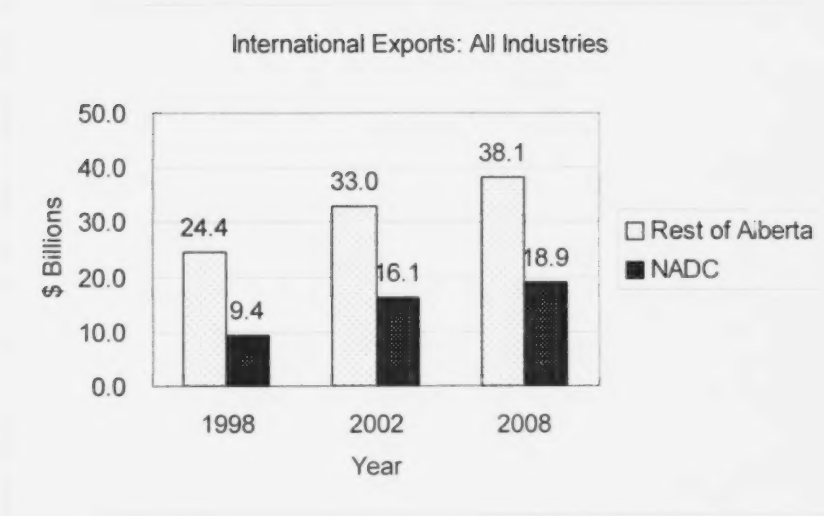
- The NADC Region exported $528 million in 1998 (4.2% of Alberta total)
- The NADC Region is forecast to export $637 million in 2008 (4.2% of Alberta total)

This method assumes that the NADC Region has the same manufacturing structure as Alberta as a whole. To the extent that the NADC Region's non-forest product industries were not as much export-oriented as those in Alberta as a whole, the values of exports of non-forest products from the NADC Region are overestimated.

All Industries

When all industries are combined,

- **In 2002, the NADC Region exported $16.1 billion (32.7% of Alberta total).**
- **In 2008, the NADC Region is forecast to export $18.9 billion (33.1% of Alberta total).**



Source: Alberta Economic Development, *Alberta International Trade Review* and estimates and forecasts by GTS Group International.

International Exports from the Northern Alberta Development Council Region for Selected Years
($ Millions)

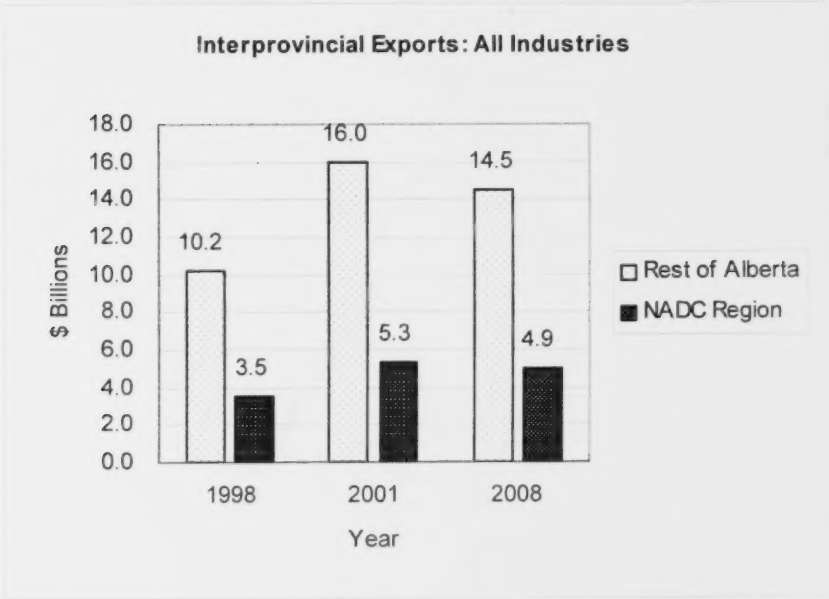
	Alberta			NADC Region			NADC as % of Alberta		
	1998	2002	2008	1998	2002	2008	1998	2002	2008
Agriculture	2,830	2,243	2,070	431	321	308	15.2	14.3	14.9
Crops	2,012	1,472	1,436	388	280	274	19.3	19.1	19.1
Wheat, barley, canola, alfalfa	1,550	1,141	1,109	345	250	244	22.3	21.9	22.0
Other	462	331	327	43	30	30	9.2	9.2	9.2
Livestock	818	771	634	43	41	34	5.3	5.3	5.3
Cattle, calves, pigs	783	729	603	40	37	31	5.1	5.1	5.1
Other	35	42	31	3	4	3	9.2	9.2	9.2
Energy and Non-Energy Minerals	16,130	30,534	35,472	6,657	13,074	15,548	41.3	42.8	43.8
Crude oil	6,714	12,666	16,252	3,287	6,634	8,727	49.0	52.4	53.7
Natural gas and natural gas liquids	8,570	17,389	18,834	3,370	6,440	6,821	39.3	37.0	36.2
Other	846	479	386	0	0	0	0.0	0.0	0.0
Manufacturing	11,435	15,526	18,409	2,306	2,636	2,962	20.2	17.0	16.1
Paper, wood pulp and wood products	2,579	2,813	3,094	1,938	2,108	2,325	75.1	74.9	75.1
Others	8,856	12,713	15,315	368	528	637	4.2	4.2	4.2
Other exports	615	805	1,008	26	33	42	4.2	4.2	4.2
Total goods exports	33,840	49,108	56,959	9,419	16,065	18,859	27.8	32.7	33.1

Source: 1998 and 2002 Alberta exports are compiled form Alberta Economic Development, Alberta International Trade Review; others are estimates and forecasts by GTS Group International.

2.3 NADC Region's Contribution to Alberta's Interprovincial Exports

The NADC Region is a major contributor to Alberta's interprovincial exports.

- **In 2001, the NADC Region exported $5.3 billion (33.1% of Alberta total).**
- **In 2008, the NADC Region is forecast to export $4.9 billion (34.1% of Alberta total).**



Source: Alberta Finance, Alberta Economic Accounts and estimates and forecasts by GTS Group International.

In 2001, Alberta exported $21.3 billion of goods (excluding crops) and $12.0 billion of services to other provinces. Interprovincial exports are important to Alberta's economy, but very few statistics are available. Information from Alberta Revenue's *Alberta Economic Accounts* was used to estimate the contribution of the NADC Region to Alberta's interprovincial exports. The method used for international trade was also applied to interprovincial trade.

Oil and natural gas were major products for Alberta's interprovincial trade. In addition, manufactured products played a more important role in interprovincial trade than in international trade.

Interprovincial Exports of Goods from the Northern Alberta Development Council Region
($ Millions)

	Alberta			NADC Region			NADC as % of Alberta		
	1998	2001	2008	1998	2001	2008	1998	2001	2008
Agriculture									
Livestock	147	356	597	8	19	32	5.3	5.3	5.3
Minerals	4,292	9,439	7,713	1,643	3,317	3,114			
Crude oil	1,756	2,022	965	860	1,052	487	49.0	52.0	50.5
Natural gas and natural gas liquids	1,962	5,928	6,748	783	2,265	2,627	39.9	38.2	38.9
Coal	19	12							
Other	928	924	926	0	0	0			
Manufacturing	9,258	11,500	11,079	1,870	1,955	1,784	20.2	17.0	16.1
Total	13,697	21,295	19,389	3,521	5,291	4,929	25.7	24.8	25.4

Sources: 1998 and 2001 Alberta exports are compiled from Alberta Revenue, *Alberta Economic Accounts;* others are estimates and forecasts by GTS Group International

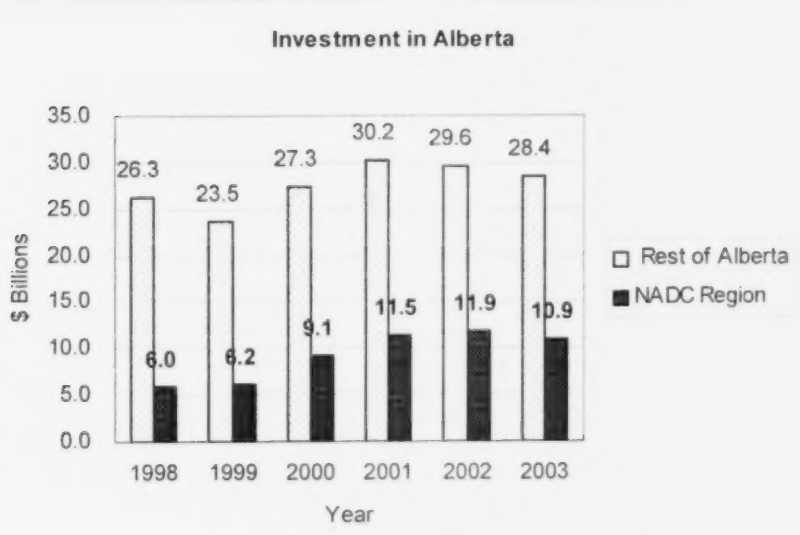
3.0 NADC Region's Contribution to Alberta's Capital Investment

Capital investment is an expenditure on the construction of residential and non-residential structures (including buildings and highways) and machinery and equipment. Investment has two kinds of impact on an economy. It creates new demand for construction materials, construction labour, and machinery and equipment during the construction phase. Once the project is completed, it will increase production capacity and create new demand for materials and supplies used for production. The size of capital investment is a good measure of the vitality and growth of the economy.

3.1 Capital Investment in the NADC Region

Investment in energy resource exploration in the NADC Region has been a major engine of economic growth for Alberta. Investment in the NADC Region generated demand for machinery and equipment, and construction materials and labour in the NADC Region itself, the rest of Alberta, the rest of Canada and other courtiers.

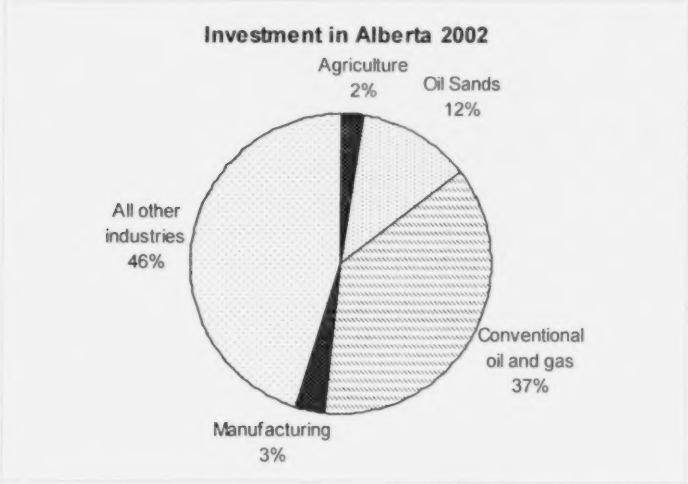
- **In 2002, the NADC Region received $11.9 billion investment (37.9% of Alberta total and 5.8% of Canada's total), of which**
- **$9.8 billion were for oilsands and conventional oil and natural gas exploration (43.3% of Alberta total).**

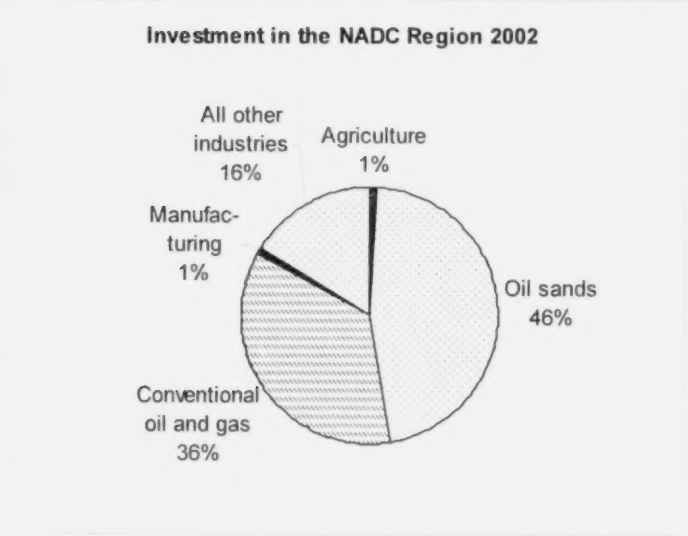


Source: Statistics Canada, *Private and Public Investment in Canada* and Estimates and forecasts by GTS Group International.

Investment in oil sands and conventional oil and gas exploration has a dominant role in total Alberta investment. In 2002, it accounted for:

- **46% of investment in Alberta, and**
- **80% of investment in the NADC Region.**





Source: Statistics Canada, *Private and Public Investment in Canada* and Estimates and forecasts by GTS Group International.

Statistics Canada publishes the value of capital investment by industry in Alberta in *Private and Public Investment in Canada*. To estimate the value of capital investment in the NADC Region from 1998 to 2003, the value of Alberta investment by industry were allocated according to the NADC Region's percentage of the following indicators:

- Agriculture: farm cash receipts
- Conventional oil and gas: the average monthly count of oil and gas wells
- Manufacturing: the value of shipments
- All other industries (including government): population

Capital Investment in Alberta
($ Millions)

	1998	1999	2000	2001	2002	2003
NADC Region						
Agriculture	101	73	72	100	98	98
Oil sands	1,530	2,420	4,220	5,910	5,515	4,943
Conventional oil and gas	2,683	2,076	3,011	3,570	4,247	3,817
Manufacturing	151	144	162	111	85	76
All other industries	1,496	1,455	1,613	1,767	1,942	1,929
Total	5,960	6,168	9,078	11,458	11,887	10,862
NADC Region Total as a P	18.5	20.8	24.9	27.5	28.6	27.7
Alberta						
Agriculture	1,097	797	783	1,088	1,072	1,071
Oil Sands	1,530	2,420	4,220	5,910	5,515	4,943
Conventional oil and gas	10,821	8,246	11,812	14,102	17,036	15,266
Manufacturing	2,397	2,295	2,575	1,759	1,348	1,209
All other industries	16,439	15,957	17,025	18,839	20,697	20,516
Total	32,284	29,715	36,415	41,698	41,500	39,271

Sources: Statistics Canada, *Private and Public Investment in Canada* and Alberta Energy, *Alberta - A World Energy Centre* for Alberta, and estimates by GTS Group International for the NADC Region.

3.2 Investment Prospects for the NADC Region

Investment prospects of the NADC Region are very strong both for a short-term and long-term according to Alberta Economic Development's *Inventory of Major Alberta Projects*, May 2003.

- The NADC Region has;

  77 projects with total investment expenditures of $12.1 billion of which

  13 projects with total investment expenditures of $9.9 billion are in oil, gas and oilsands development

  that are either to be completed, under construction, or announced to start in 2003.

- The rest of Alberta has:

  421 projects with total investment expenditures of $15.3 billion, of which

  7 projects with total investment expenditures of $1.8 billion are in oil and gas development.

Besides these major projects, there are other major projects that have been proposed for the future but have not presented the timing of investment yet

- The NADC Region has;

  92 proposed projects with total investment expenditures of $33.4 billion, of which

  26 projects with total investment expenditures of $30.7 billion are in oil, gas, and oil sands development.

- The rest of Alberta has,

  302 projects with total investment expenditures of $12.7 billion, of which

  5 projects with total investment expenditures of $4.4 billion are in oil and gas development.

Source: Estimates by GTS Group International base on data from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003*.

Inventory of Alberta Major Projects as of May 2003
Projects Completed, Under Construction or Announced
($ Millions)

Industry	NADC Region		Rest of Alberta	
	No. of projects	Value $Millions	No. of projects	Value $Millions
Agriculture & Related	1	7	8	79
Chemicals & Petrochemicals	1	31	1	15
Commercial/Retail	4	60	62	1,468
Commercial/Retail and Residential	0	0	4	289
Forestry & Related	2	130	1	5
Infrastructure	27	190	79	5,331
Institutional	15	140	132	2,435
Manufacturing	0	0	1	5
Mining	1	30	0	0
Oil, Gas & Oilsands	13	9,889	7	1,799
Other Industrial	0	0	8	77
Pipelines	5	1,301	1	1,000
Power	3	271	6	824
Residential	4	33	62	765
Telecommunications	0	0	5	380
Tourism/Recreation	1	9	44	842
All industries	77	12,090	421	15,313

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003*.

Inventory of Alberta Major Projects as of May 2003
Proposed Projects
($ Millions)

Industry	NADC Region		Rest of Alberta	
	No. of projects	Value	No. of projects	Value
Agriculture & Related	2	8	6	56
Chemicals & Petrochemicals			1	200
Commercial/Retail	1	3	19	703
Commercial/Retail and Residential	1	2	2	420
Forestry & Related	3	141		
Infrastructure	24	442	71	1,954
Institutional	13	315	77	1,484
Manufacturing			1	50
Mining			1	10
Oil, Gas & Oilsands	26	30,718	5	4,406
Other Industrial	2	7	8	42
Pipelines	5	153	7	144
Power	1	1,500	6	497
Residential			45	615
Telecommunications				
Tourism/Recreation	14	108	53	2,107
All industries	92	33,397	302	12,687

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003.*

Alberta Economic Development collects and compiles information on major investment projects in the province, and provides the following for each major investment project in the Inventory:

- Industry classification
- Name of a project and company
- Location of a project
- Total investment expenditures
- Year of start
- Year of completion
- Current status (completed, under-construction, announced, proposed)

The latest issue of the Inventory (May 2003) lists projects that were completed in 2003; started before 2003, and are under-construction in 2003; will start in 2003; or are proposed for sometime in the future.

For each project, the Inventory lists the value of total investment, a starting year and an ending year. For example, Project A will cost $120 million, start in 2003 and end in 2005.

From this information alone, it is not possible to estimate how the $120 million will be spent in years 2003, 2004 and 2005.

Assuming that the amount of investment expenditures will be spent in an equal amount in each year ($40 million in 2003, 2004 and 2005 in the above example), the total value of investment in 2003 is estimated at roughly 30% of the total value of investment expenditures reported as "intended investment" in Statistics Canada's *Private and Public Investment in Canada, Intentions 2003*.

Although many investment projects are not announced to the public and are not listed in the Inventory, most large-scale investment projects are listed because they often require government approval to meet environmental regulations.

Those projects that have been "announced" and listed in the Inventory have an investment schedule. They have already cleared or under review by regulatory agencies, while those projects that have been proposed are still in the early stage of planning and do not show an investment schedule yet. Thus, the "announced projects" have a higher change of getting carried out than the "proposed" projects. The table in the following page shows examples of major proposed projects.

The Inventory can not be used to estimate the total value of investment in Alberta or in the NADC Region, but it is a reasonable indicator of investment prospects for Alberta and the NADC Region.

Proposed Projects in Oil, Gas, and Oilsands
in the Northern Alberta Development Council Region
($ Millions)

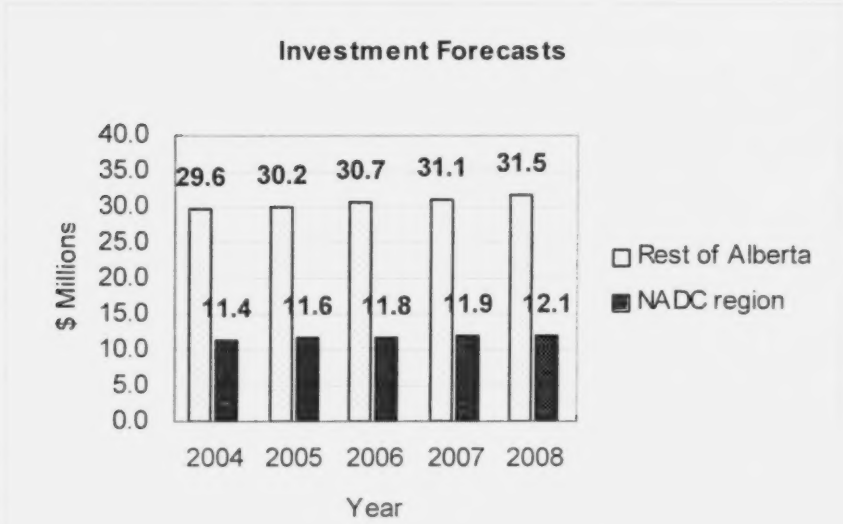
Projects	Value
Oilsands Mine (Kearl Lease 187)	3,200
Gas Handling Facility	4
Heavy Oil Thermal Plant	150
'Orion' Heavy Oil SAGD Facility	313
'Project Horizon' Mining and Drilling Project phase 1	4,900
'Project Horizon' Mining and Drilling Project phase 3	1,400
'Project Horizon' Mining and Drilling Project phase 2	1,700
SAGD Bitumen Commercial Project phase 4	5
SAGD Project Phase 2	275
'Dover' PILOT PROJECT	30
'Jackfish' SAGD Oilsands Project	400
Muskeg River Expansion	500
Foster Creek Commercial Thermal Recovery Project phase 2	767
Oilsands Mine & Extraction Plant	1,700
'Tucker Lake' SAGD Project	400
Extension of Phases 9 & 10 'Mahihkan North'	300
Heavy Oil Plant Expansion Phases 14 to 16 'Nabiye'	700
Hangingstone SAGD Commercial Production Project	300
'Long Lake' SAGD Heavy Oil Project phase 1	2,500
Pilot Plant to test 'Toe-to-Heel' Air Injection Technology	30
'Voyageur' Oil Sands Facility Expansion	2,500
SULPHUR EMISSION REDUCTION PROGRAM	400
Phase 4: Upgrader Expansion Phase 2 / Aurora Mine Train 3	2,300
'Northern Lights' Oilsands Mine and Extraction Plant	3,500
Foster Creek Commercial Thermal Recovery Project Phase 3	844
In-Situ Oilsands Project (Kearl Lease 187)	1,600
Total	30,718

Source: Alberta Economic Development, *Inventory of Major Alberta Projects May 2003.*

3.3 Investment Forecasts for the NADC Region

Given the investment prospects presented in the Inventory of Major Alberta Projects, investment forecasts for Alberta and the NADC Region were made on the assumption that the trend in investment in the period from 1998 to 2003 will continue in the period from 2004 to 2008.

- **The NADC Region will remain as a major place of investment in Alberta from 2004 to 2008.**
- **The value of investment in the NADC Region is forecast to reach about $11 to $12 billion a year from 2004 to 2008 (about 28% of Alberta total).**



Source: Forecasts by GTS Group International based on data from Alberta Finance, *Alberta Economic Accounts*.

Forecasts of Capital Investment in Alberta
($ Billions)

NADC Region

Year	2004	2005	2006	2007	2008
Government	0.3	0.3	0.4	0.4	0.4
Business	11.1	11.3	11.4	11.6	11.7
Residential	0.7	0.7	0.7	0.7	0.7
Non-residential	10.3	10.5	10.6	10.7	10.9
Total	11.4	11.6	11.8	11.9	12.1

The Rest of Alberta

Year	2004	2005	2006	2007	2008
Government	3.2	3.4	3.5	3.6	3.7
Business	26.3	26.8	27.2	27.5	27.8
Residential	6.5	6.6	6.8	6.9	7.0
Non-residential	19.9	20.2	20.5	20.7	21.0
Total	29.6	30.2	30.7	31.1	31.5

Alberta

Year	2004	2005	2006	2007	2008
Government	3.6	3.7	3.9	4.0	4.1
Business	37.4	38.0	38.6	39.0	39.5
Residential	7.2	7.3	7.4	7.6	7.7
Non-residential	30.3	30.7	31.1	31.5	31.8
Total	41.0	41.8	42.4	43.0	43.6
NADC Region's Percentage of Alberta	27.8	27.8	27.7	27.7	27.7

Source: Forecasts by GTS Group International based on data from Alberta Finance, *Alberta Economic Accounts*

For forecasting investment for Alberta, data from Alberta Finance, *Alberta Economic Accounts*, were used. The data from this source were divided into four categories and are available in 1997 constant dollars.

- Government
- Business – residential structure
- Business non-residential structures

Each category of investment was forecast by extending a trend in the from 1998 to 2003 to the period from 2003 to 2008.

To forecast investment in the NADC Region, the NADC Region's percentage of Alberta total investment (which was used for the estimation of investment in the NADC Region from1998 to 2003) was applied to each forecast of Alberta investment.

Investment in business non-residential structure includes investment in oil sands investment. In forecasting this category of investment, no attempt was made to make a specific scenario for the timing and size of oil sands investment projects listed in Alberta Economic Development's *Inventory of Major Alberta Projects*. But the forecasts for business non-residential structure in the NADC Region imply that investment in oil sands development will be about $5 billion a year from 2004 to 2008.

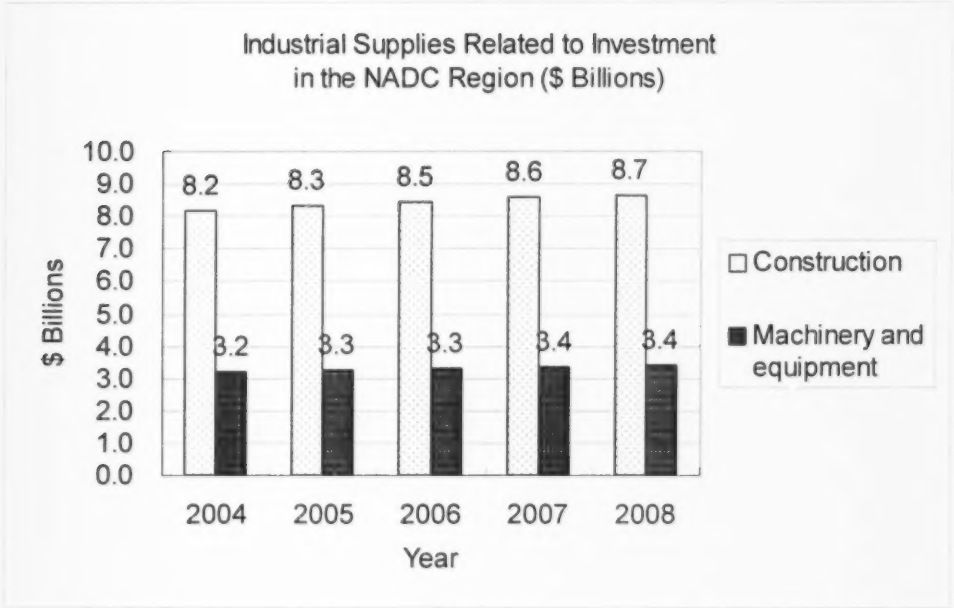
Oil sands development is supported by research and development, which creates investment in research and development and hires researchers. Information is scarce on the total size of research and development and employment related to oil sands development. But they appear to be of a considerable size. For example, Syncrude alone spent $30 million on research and development in 2001.

4.0 NADC Region's Contribution to Industrial Supplies

Investment in the NADC Region creates large demand for construction materials and labour and machinery and equipment not only in the NADC Region but also in the rest of Alberta, the rest of Canada and the rest of world.

- **Every $100 million invested in the NADC creates $64.1 million demand for construction materials and labour in Alberta and $35.9 million demand for machinery and equipment ($5.8 million in Alberta, $2.9 million in the rest of Canada, and $27.2 million in the rest of world).**

- **Investment in the NADC Region for the period from 2004 to 2008 creates about $8.5 billion demand for construction materials and labour and $3.3 billion demand for machinery and equipment a year.**



Source: Forecasts by GTS Group International based on data from Alberta Finance, *Alberta Economic Multipliers 1998.*

4.1 Materials and Supplies for Production

Firms in the NADC Region purchase materials and supplies as input into their current production process. These materials and supplies are purchased within the NADC Region, from the rest of Alberta, the rest of Canada and the rest of the world.

Unfortunately, very few statistics are available on the value of materials and supplies purchased by firms at a regional level. One exception is information collected and published by Statistics Canada in *Manufacturing Industries of Canada: National and Provincial Areas.* This publication, based on an annual survey of manufacturing industries, has the value of materials and supplies used for production by manufacturing industries in Alberta as a whole.

Statistics Canada was asked to prepare a special tabulation of this information for manufacturing industries in the NADC Region for 1998 and 1999 (the latest year for which such tabulation can be compiled).

This special tabulation showed that the value of materials and supplies used for the production of own goods (excluding those purchased for resales) by all manufacturing industries in the NADC Region was:

- $1.1 billion in 1998, and
- $1.1 billion in 1999.

Due to the limited variety of manufacturing industries in the NADC at present, a large percentage of these materials and supplies appear to be purchased from outside of the Region. But there is not enough information to estimate the places of purchase

Manufacturing Industries in the Northern Development Council Region and Alberta

		1998		1999	
	Units of Measurement	Alberta	NADC Region	Alberta	NADC Region
Number of establishments	Counts	2,629	147	2,481	132
Production and related workers					
Number of workers	Counts	92,280	6,321	89,685	6,210
Person hours paid	Thousands	196,024	13,542	188,889	13,321
Wages and salaries	$ Millions	3,207	289	3,106	295
Cost of fuel and electricity	$ Millions	770	89	884	98
Cost of materials and supplies used	$ Millions	19,468	1,106	21,240	1,095
Value of shipments of goods of own manufacturing	$ Millions	32,841	2,219	34,823	2,397
Value added	$ Millions	12,571	1,025	13,415	1,211
Administrative, office and other non-manufacturing employees					
Number of workers	Counts	24,215	1,126	23,618	1,059
Salaries and wages	$ Millions	1,342	67	1,334	69
Total employees					
Number	Counts	116,495	7,447	113,303	7,269
Salaries and wages	$ Millions	45,490	3,562	44,396	3,641
Cost of materials, supplies and goods for resales	$ Millions	22,214	1,152	24,104	1,126
Value of shipments and other revenues	$ Millions	36,239	2,261	38,531	2,425
Value added	$ Millions	13,588	1,020	14,282	1,209

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

4.2 Machinery and Equipment for Investment

Investment expenditures are comprised of two parts: cost of construction, and cost of machinery and equipment. Statistics Canada publishes those two components by industry in Private and Public Investment in Canada.

Alberta Revenue's *Alberta Economic Multipliers 1998* has a table called, "Alberta Commodity Supply Ratio," which shows the percentage distribution of locations of purchase for 44 commodities, including machinery and equipment.

The locations of purchase are grouped into:

- Alberta
- Rest of Canada, and
- Rest of World.

Ratios were calculated from the 1998 Canadian interprovincial input-output tables.

By applying the commodity supply ratio for machinery and equipment to the amount of investment expenditures on machinery and equipment, the value of machinery and equipment purchased for investment in the NADC Region was estimated.

Distribution of Investment Expenditures between Construction and Machinery and Equipment Expenditures by Industry, 2003

Industry group	Value of investment ($ Millions)			% of total	
	Construction	Machinery and equipment	Total	Construction	Machinery and equipment
Agriculture	203	867	1,071	19.0	81.0
Oil and gas extraction	12,467	3,885	16,352	76.2	23.8
Manufacturing	167	1,042	1,209	13.8	86.2
All other industries	12,350	8,290	20,640	59.8	40.2
Total	25,187	14,084	39,271	64.1	35.9

Source: Compiled from *Private and Public Investment in Canada*.

Alberta Commodity Supply Ratio (%)

Commodity	Alberta	Rest of Canada	Rest of World	Total Supply
Machinery and equipment	16.1	8.1	75.8	100.0

Source: Alberta Revenue, *Alberta Economic Multipliers 1998*

Estimates of Value of Machinery and Equipment Purchased by Location for Investment in the Northern Alberta Development Council Region
($ Millions)

	1998	1999	2000	2001	2002	2003
Total value of investment	5,960	6,168	9,078	11,458	11,887	10,862
Expenditures on machinery and equipment	1,813	1,836	2,564	3,139	3,252	3,001
Purchase by location						
Alberta	293	296	414	506	525	484
Rest of Canada	147	149	207	254	263	243
Rest of World	1,374	1,391	1,943	2,378	2,464	2,274

Source: Estimates by GTS Group International

From 1998 to 2003, each $100 million of investment in the NADC Region generated purchases of machinery and equipment from:

- Alberta $4.5 million
- Rest of Canada $2.3 million
- Rest of World $21.3 million

4.3 Construction Materials and Labour for Investment

Part of investment expenditures is spent on the construction of residential and non-residential buildings, creating demand for construction materials and labour. According to the Alberta Commodity Supply Ratio, those expenditures are all spent in the province.

Distribution of Investment Expenditures between Construction and Machinery and Equipment Expenditures by Industry, 2003

	Value of investment ($ Millions)			% of total	
Industry group	Construction	Machinery and equipment	Total	Construction	Machinery and equipment
Agriculture	203	867	1,071	19.0	81.0
Oil and gas extraction	12,467	3,885	16,352	76.2	23.8
Manufacturing	167	1,042	1,209	13.8	86.2
All other industries	12,350	8,290	20,640	59.8	40.2
Total	25,187	14,084	39,271	64.1	35.9

Source: Compiled from *Private and Public Investment in Canada*.

The average impact of investment on the value of purchase of construction materials and labour was applied to the forecasts of investment in the NADC Region from 2004 to 2008 to get the following forecasts.

Forecasts of Demand for Construction Materials and Labour and Machinery and Equipment in Alberta from Investment in the Northern Alberta Development Council Region
($ Millions)

	2004	2005	2006	2007	2008
Total investment	11,401	11,599	11,771	11,923	12,059
Construction expenditures per $1 of investment	0.718	0.718	0.718	0.718	0.718
Machinery and equipment expenditures per $ 1 of investment	0.282	0.282	0.282	0.282	0.282
Construction expenditures	8,186	8,328	8,452	8,561	8,658
Machinery and equipment expenditures	3,215	3,271	3,320	3,362	3,401

Source: Estimates by GTS Group International

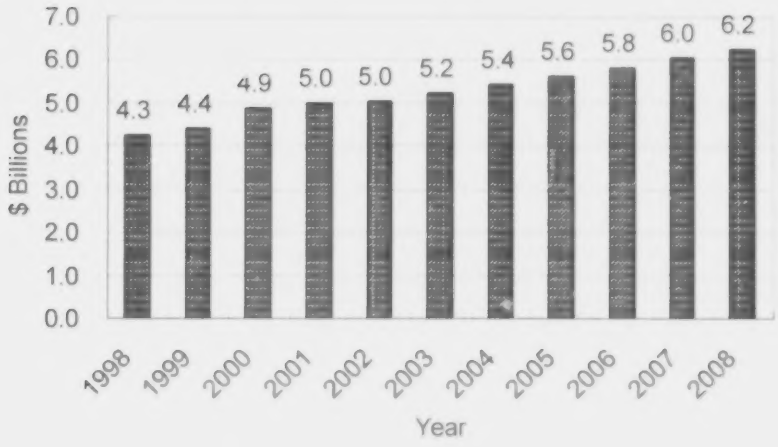
5.0 NADC Region's Contribution of Employment Earnings

- **In 2001, total earnings of all persons with earnings in the NADC Region were $5.0 billion (8.6% of Alberta total). By 2008, total employment earnings in the NADC Region will reach $6.2 billion.**

- **It is more common for companies that have plants in the NADC Region to have corporate offices at a location somewhere other than the NADC Region. Therefore, employment earnings in the NADC Region underestimate total employment earnings of the companies that generate a major portion of their income from their operations in the NADC Region.**

- **In 2001, average employment earnings of those who worked full-time and full-year in the NADC Region were $43,922, while those in the rest of Alberta were $44,094. People working in the NADC Region received competitive wages and salaries in the province.**

Total Employment Earnings in the NADC Region



Source: Statistics Canada, *Census of Canada* and forecasts by GTS Group International.

Information on total employment earnings in the NADC Region is available for 1996 and 2001 from Canada Census. The Census collects information on employment earnings according to the location of permanent residence of people. As a result, employment income of people who worked in a corporate office in Calgary, for example, was reported in Calgary, even though the company's major plant might be located in the NADC Region. Employment income of those who work temporarily in the NADC Region, for example, for construction, are also reported at the place of their permanent residence.

It is more common for companies that have plants in the NADC Region to be headquartered at a location somewhere other than the NADC Region. Therefore, employment earnings in the NADC Region underestimate total employment earnings of the companies that generate a major portion of their income from their operations in the NADC Region. As major investment projects take place in the NADC Region, they attract temporary construction workers. This will be another factor that underestimates total employment earnings in the NADC Region.

Average and Total Earnings in the Northern Alberta Development Council Region and Alberta, 1996

	NADC Region	The Rest of Alberta	Alberta	NADC as % of Alberta
All persons with earnings (counts)	139,700	1,359,740	1,499,440	9.3
Average earnings (all persons with earnings, $)	26,468	26,105	26,138	101.3
Total earnings (all persons with earnings, $ millions)	3,698	35,495	39,193	9.4
Worked full year, full time (counts)	68,000	684,570	752,570	9.0
Average earnings (worked full year, full time, $)	37,959	37,076	37,156	102.2
Total earnings (worked full year, full time, $ millions)	2,581	25,381	27,962	9.2

Source: Compiled from Statistics Canada, *1996 Census Community Profiles*

Average and Total Earnings in the Northern Alberta Development Council Region and Alberta, 2001

	NADC Region	The Rest of Alberta	Alberta	NADC as % of Alberta
All persons with earnings (counts)	153,640	1,614,800	1,768,440	8.7
Average earnings (all persons with earnings, $)	32,392	32,623	32,603	99.4
Total earnings (all persons with earnings, $ millions)	4,977	52,680	57,656	8.6
Worked full year, full time (counts)	77,150	847,770	924,920	8.3
Average earnings (worked full year, full time, $)	43,922	44,094	44,080	99.6
Total earnings (worked full year, full time, $ millions)	3,389	37,382	40,770	8.3

Sources: Compiled from Statistics Canada, *2001 Census Community Profiles*

Average employment earnings in the NADC Region were virtually the same as those in the rest of Alberta for all persons and slightly higher for those who worked full-time for a full year. As a result, the NADC Region shares Alberta's total employment earnings in proportion to its population share.

Alberta Revenue's *Alberta Economic Accounts* has a time series of total wages and salaries in Alberta that are very close to total employment earnings found in the 1996 and 2001 Census.

Using Census data, the NADC percentage of Alberta's total earnings was calculated and applied to forecasts of total wages and salaries in Alberta to obtain forecasts of employment earnings in the Region.

To the extent that a large volume of investment in the NADC Region attracts people into the NADC Region, this forecasting method will underestimate the forecasts of total employment earnings in the NADC Region.

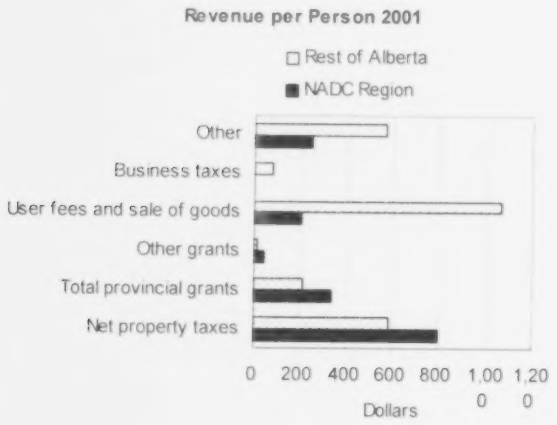
6.0 NADC Region's Contribution to Revenue of Government

Economic activity in the NADC Region generates income that contributes to the revenues of municipal governments in the NADC Region, the Government of Alberta and the Government of Canada. The NADC Region has been and will remain as a major contributor to the revenue of the Government of Alberta and the Government of Canada.

6.1 NADC Region's Contribution to Municipal Governments

The large industrial assessment base in the NADC Region results in lower user fees and sales of goods by municipal governments, as well as a higher per capita property tax, than the rest of the province.

- **In 2001, the total revenue of all municipal governments in the NADC Region was $444 million. This was 6.2% of the total revenue of all municipal governments in Alberta.**
- **In 2001, the average revenue per person from net property taxes in the NADC Region was $796, while that in Alberta was $589.**



Source: Alberta Municipal Affairs, *Municipal Profiles*.

Revenues of Municipal Governments
in the Northern Alberta Development Region
($)

Revenue sources	1999	2000	2001
Net property taxes	184	194	217
Total provincial grants	78	89	92
Other grants	4	3	11
User fees and sale of goods	50	54	56
Business taxes	1	1	0
Other	54	56	68
Sub-total	370	397	444
Actual education taxes	129	129	114
Total	499	526	558

Source: Compiled from Alberta Municipal Affairs, *Municipal Profiles*

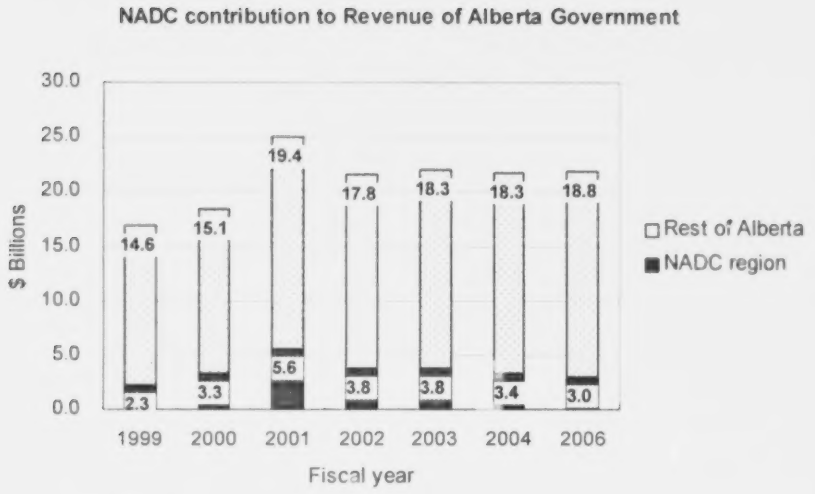
From Alberta Municipal Affairs' *Municipal Profiles*, the revenues of municipal governments in the NADC Region were compared. Every municipal government in Alberta files an annual financial report with Alberta Municipal Affairs. These were compiled for the municipal governments in the NADC Region and for all of Alberta for 1999, 2000 and 2001.

6.2 NADC Region's Contribution to the Government of Alberta

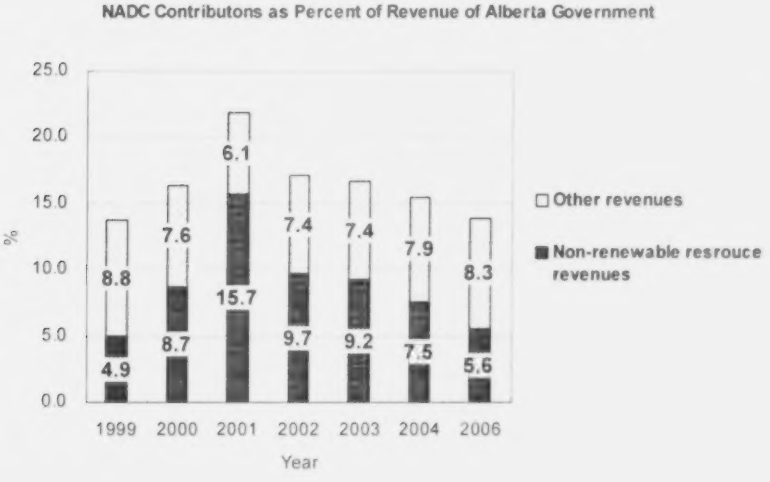
According to Alberta Finance's Alberta Budget, the NADC Region contributed $3.7 billion to the revenue of the Government of Alberta (17.2% of total revenue) for the fiscal year ending March 31, 2002.

Non-renewable resource revenues have been the largest component of the NADC Region's contribution. They were as large as $4.0 billion for the fiscal year ending 2001 but are forecast to decline to $1.2 billion for the fiscal year ending March 31, 2006.

This is because Alberta Finance makes conservative forecasts for energy prices. The NADC Region's share of Alberta's total non-renewable resource revenue, however, is forecast to increase slightly from 34.2% for the fiscal year ending March 31, 2002 to 36.1% for the fiscal year ending March 31, 2006.



Source: Alberta Finance, *Alberta Budget* and estimates by GTS Group International.



Source: Alberta Finance, *Alberta Budget* and estimates by GTS Group International.

Alberta Finance's *Alberta Budget* provides a financial report that describes Alberta

government revenues and target revenue from various sources up to the year ending March 31, 2006. The contribution of the NADC Region to each type of revenue was estimated by applying a regional proportion indicator.

The regional proportion indicators used to allocate each source of revenue of the Government of Alberta to the NADC Region are shown in the Table, " Estimates of the Contribution of the Northern Alberta Development Council Region to the Revenue of the Government of Alberta, Fiscal Year 2002-2003 " found on Page 37 and Page 38 of this report.

It is difficult to find a good regional proportion indicator for corporate income tax. For this study, 'value added by industry' was used as the indicator. Value added by industry (also called Gross Domestic Product by Industry) is defined as:

Value added by industry = (value of shipments) - (cost of electricity and utilities) - (cost of materials and supplies used for production)

= (profits) + (undistributed corporate reserves) + (wages and salaries)

Corporate income tax is generally levied against corporate profits after various provisions for tax deductions are made. Therefore, corporate profits would be a better indicator than value added by industry. However, information on corporate profits by industry is not presently available either at a provincial or regional level.

'Value added by industry' was used based on the assumption that since corporate profits are part of value added by industry, the amount of profits is proportional to value added as a whole. In reality, industry may cut profits in times of economic recession before they reduce wages and salaries or lay-off employees. Readers are cautioned that the corporate income tax component of the NADC Region's contribution to the revenue of the Government of Alberta is a less reliable estimate

Estimates of the Contribution of the Northern Alberta Development Region to the Revenue of the Government of Alberta
Fiscal Year 2002-2003
($ Millions)

Type of revenue	Alberta Forecast ($ Millions)	NADC Region NADC proportion indicators	2002 indices (%)	NADC contributions ($ Millions)
Income Tax				
Personal income tax	4,867	income	8.63	420
Corporate income tax	2,400	value added	17.59	422
Sub-total	7,267			842
Other Taxes				
School property tax	1,101	municipal school tax	9.56	105
Tobacco tax	633	population	9.38	59
Fuel tax	590	population	9.38	55
Freehold mineral rights tax	196	well counts	9.38	18
Insurance taxes	152	population	9.38	14
Hotel room tax	55	income	8.63	5
Sub-total	2,727	sub-total		257
Non-Renewable Resource Revenue				
Natural gas and by-products royalty	4,584	gas production	37.40	1,716
Crude oil royalty	1120	conventional oil production	8.10	91
Synthetic crude oil and bitumen royalty	135	all to NADC Region	100.00	135
Coal royalty	11		0.00	0
Bonuses and sales of Crown leases	539	well counts	24.90	134
Rentals and fees	156	well counts	24.90	39
Royalty tax credit	-117	well counts	24.90	-29
Sub-total	6,428			2,086
Transfers from Government of Canada				
Canada Health and Social Transfer	1,339	population	9.38	126
2003 Health Accord	-			
Agriculture support programs	408	farm cash income	9.38	38
Labour market development	122	population	9.38	11
Other	200	population	9.38	19
Sub-total	2,069			194

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Continued from the previous page				
Net Income from Commercial Operations				
Lottery revenue	1,112	population		
Liquor revenue	533	population		
Alberta Treasury Branches	199	population		
Other	5	population		
Sub-total	1,849	population	9.38	173
			9.38	
Premiums, Fees and Licences				
Health care insurance premiums	897	population	9.38	84
Motor vehicle licences	240	population	9.38	
Crop and hail insurance premiums	102	farm cash income	9.38	10
Timber rentals and fees	53	forest industry revenue	50.25	27
Land titles	40	population	9.38	4
Other	260	population	9.38	24
Sub-total	1,592			149
Investment Income				
Alberta Heritage Savings Trust Fund	-595	population		
Alberta Capital Finance Authority	340	population		
Agriculture Financial Services Corporation	102	population		
Debt Retirement Account	102	population		
Alberta Sustainability Fund	-	population		
Endowment Funds Medical Research	(63)	population		
Science and Engineering Research	(24)	population		
Scholarship	(22)	population		
Other	41	population		
Sub-total	-119	population	9.38	-11
Other				
Refunds of expenss	252	population		
Fines and penalties	57	population		
Miscellaneous	453	population		
Sub-total	762	population	9.38	71
Total Revenue	22,575			3,761

Sources:
Revenues of the Alberta government are compiled from Alberta Revenue, *Alberta Budget*. They are the latest forcasts of 2001-2002 budget revenues.
NADC contributionis are estimated by GTS Group International.

Revenue of the Government of Alberta
($ Millions)

Fiscal year ending on March 31	1999	2000	2001	2002	2003	2004	2006
Income Tax	6,260	6,355	5,966	6,412	7,267	7,051	7,550
Personal income tax	4,601	5,100	3,943	4,183	4,867	5,035	5,674
Corporate income tax	1,659	1,255	2,023	2,229	2,400	2,016	1,876
Other Taxes	2,296	2,369	2,538	2,563	2,727	2,811	2,935
Non-Renewable Resource Revenue	2,368	4,650	10,586	6,227	6,428	4,776	3,388
Transfers from Government of Canada	1,335	1,640	1,813	2,266	2,069	2,386	2,623
Investment Income	1,604	1,906	1,353	787	-119	1,019	1,327
Net Income from Commercial Operations	1,386	1,573	1,636	1,694	1,849	1,795	1,934
Premiums, Fees and Licences	1,291	1,329	1,280	1,363	1,592	1,716	1,806
Other	342	350	425	614	762	374	382
Total Revenue	16,882	20,172	25,597	21,926	22,575	21,928	21,945

Source: Alberta Revenue, *Alberta Budget*.

Contribution of the Northern Alberta Development Council Region to the Revenue of the Government of Alberta
($ Millions)

Fiscal year ending on March 31	1999	2000	2001	2002	2003	2004	2006
Income Tax	667	629	696	753	842	789	820
Personal income tax	382	440	340	361	420	435	490
Corporate income tax	285	189	356	392	422	355	330
Other Taxes	237	245	258	242	257	265	277
Non-Renewable Resource Revenue	835	1,760	4,021	2,132	2,086	1,643	1,222
Transfers from Government of Canada	122	150	161	212	194	200	204
Investment Income	146	174	123	74	-11	96	124
Net Income from Commercial Operations	126	143	149	159	173	168	181
Premiums, Fees and Licences	151	163	139	134	149	186	169
Other	31	32	39	58	71	35	36
Total Revenue	2,315	3,296	5,586	3,764	3,761	3,382	3,033

Source: Estimates by GTS Group International

Percentage of NADC Region's Contribution to the Revenue of the Government of Alberta

Fiscal year ending on March 31	1999	2000	2001	2002	2003	2004	2006
Income Tax	10.7	9.9	11.7	11.7	11.6	11.2	10.9
Personal income tax	8.3	8.6	8.6	8.6	8.6	8.6	8.6
Corporate income tax	17.2	15.1	17.6	17.6	17.6	17.6	17.6
Other Taxes	10.3	10.3	10.2	9.4	9.4	9.4	9.4
Non-Renewable Resource Revenue	35.3	37.8	38.0	34.2	32.5	34.4	36.1
Transfers from Government of Canada	9.1	9.1	8.9	9.4	9.4	8.4	7.8
Investment Income	9.1	9.1	9.1	9.4	9.2	9.4	9.3
Net Income from Commercial Operations	9.1	9.1	9.1	9.4	9.4	9.4	9.4
Premiums, Fees and Licences	11.7	12.3	10.9	9.8	9.4	10.8	9.4
Other	9.1	9.1	9.2	9.4	9.3	9.4	9.4
Total Revenue	13.7	16.3	21.8	17.2	16.7	15.4	13.8

Source: Estimates by GTS Group International

When three major components of the contributions of the NADC Region to the revenue of the Government of Alberta were combined together, the NADC Region contributed $2.9 billion (22.8%of Alberta total for these three components) for the year ending March 31, 2002.

Selected Components of Revenue of Government of Alberta
($ Millions)

Fiscal year ending March 31	1999	2000	2001	2002	2003	2004	2006
Personal Income Tax	4,601	5,100	3,943	4,183	4,867	5,035	5,674
Corporate Income Tax	1,659	1,255	2,023	2,229	2,400	2,016	1,876
Non-Renewable Resource Revenue	2,368	4,650	10,586	6,227	6,428	4,776	3,388
Total Above	8,628	11,005	16,552	12,639	13,695	11,827	10,938

Source: Alberta Fiance, *Alberta Budget*.

Contribution of NADC Region to Selected Components of Revenue of Government of Alberta
($ Millions)

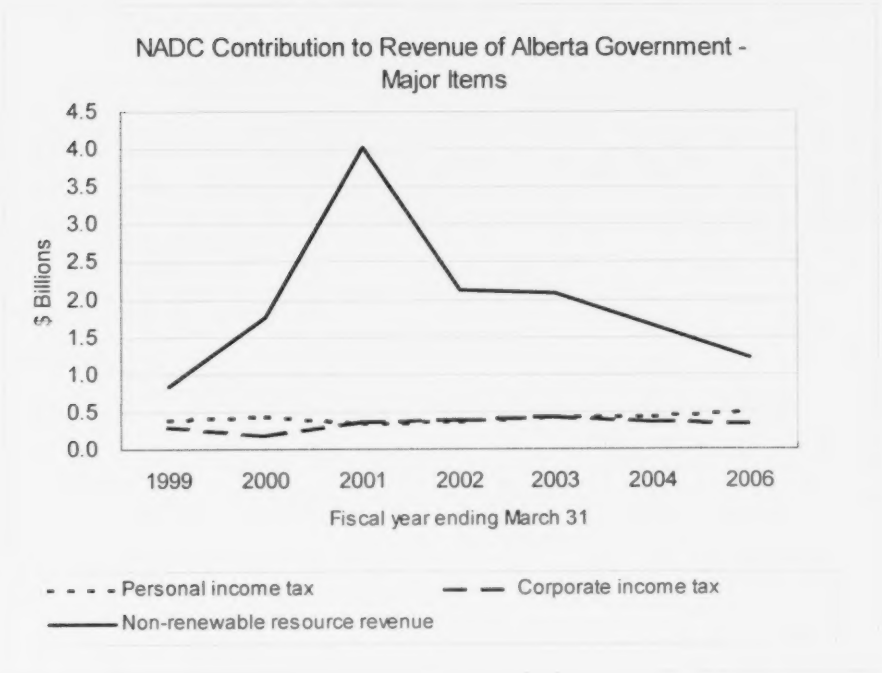
Fiscal year ending March 31	1999	2000	2001	2002	2003	2004	2006
Personal Income Tax	382	440	340	361	420	435	490
Corporate Income Tax	285	189	356	392	422	355	330
Non-Renewable Resource Revenue	835	1,760	4,021	2,132	2,086	1,643	1,222
Total Above	1,502	2,389	4,717	2,885	2,928	2,433	2,042
NADC Region as % of Alberta	17.4	21.7	28.5	22.8	21.4	20.6	18.7

Source: Estimates by GTS Group International.

Comparison of Total NADC Region Contribution and Total Revenue of Government of Alberta
($ Millions)

Fiscal year ending March 31	1999	2000	2001	2002	2003	2004	2006
Total NADC Region Contribution	2,315	3,296	5,586	3,764	3,761	3,382	3,033
Total Alberta Government Revenue	16,882	20,172	25,597	21,926	22,575	21,928	21,945
NADC Region as % of Alberta	13.7	16.3	21.8	17.2	16.7	15.4	13.8
Selected Revenues as % of Total Government of Alberta	51.1	54.6	64.7	57.6	60.7	53.9	49.8

Source: Total Alberta government revenue are from Alberta Finance, *Alberta Budget*; NADC Region contribution are estimates by GTS Group International.



Source: Estimates by GTS Group International based on data from Alberta Finance, *Alberta Budget*.

Non-renewable resource revenues fluctuated widely from year to year mainly due to the fluctuations in international prices of oil and natural gas. The amount of royalties from natural gas and by-products, crude oil, and synthetic crude and bitumen decreased significantly from the year ending March 31, 2001 to 2002. This was because, the average price of natural gas decreased from Cdn$6.08 per thousand cubic feet (mcf) to Cdn$3.94 in 2002, and the average price of oil decreased from US$32.20 per barrel to US$24.17.

Synthetic crude oil and bitumen royalty is regulated by the Government of Alberta. Each oil sands project can be configured in several different ways how royalty is determined and paid. In general, the applicable royalty depends on project gross revenue, project net revenue, and various deductions to arrive at net revenue. Thus, the amount of royalty depends on not only international oil prices but also how these regulations are applied to each specific oil sands project.

Alberta Finance forecasts the non-renewable resource revenue on the assumption that international oil prices decrease from US$28.86 per barrel in the year ending March 31, 2003

to US$23.30 in 2004 and US$22.00 in 2005 and 2006. Natural gas prices are forecast to decline from Cdn$4.65 per thousand cubic feet in the year ending March 31, 2003 to Cdn$4.05 in 2004, Cdn$3.50 in 2005 and Cdn$3.45 in 2005.

Alberta Finance does not explicitly show how much oil sands production increases from the year ending March 31, 2003 to 2006, but indicates that although oil sands investment is not expected to exhibit the rapid growth of recent years, ongoing projects will keep investment levels high over the next several years. Alberta Finance also mentions that oil sands production accounted for 42.9% of Alberta's total oil production in 2001 and will account for 67% by 2006.

Alberta Finance's forecasts of oil sands royalty revenues appears to be consistent with these assumptions about future oil sands investment. Therefore, the relatively low oil sands royalty revenue for the forecasting period must be due to a combination of Alberta Finance's conservative oil price forecasts and the nature of oil sands royalty regulations that are applied to the initial stages of new oil sands projects. This implies that the amount of oil sands royalty revenue will be higher than Alberta Finance's forecasts if oil prices or/and natural gas prices turn out to be higher than those assumed by Alberta Finance and as new oil sands projects mature beyond their initial stage of production.

Non-Renewable Resource Revenues of the Government of Alberta
($ Millions)

Fiscal year ending March 31	1999	2000	2001	2002	2003	2004	2005	2006
Natural gas and by-products royalty	1,467	2,441	7,200	4,030	4,584	3,480	2,658	2,408
Crude oil royalty	470	1,072	1,500	987	1,120	502	358	272
Synthetic crude oil and bitumen royalty	59	426	712	185	135	103	107	141
Coal royalty	17	15	12	17	11	11	13	13
Bonuses and sales of Crown leases	463	743	1,159	969	539	679	561	541
Rentals and fees	142	141	147	148	156	144	142	138
Royalty tax credit	-250	-188	-144	-109	-117	-143	-130	-125
Total	2,368	4,650	10,586	6,227	6,428	4,776	3,709	3,388

Source: Alberta Finance, Alberta Budget

Regional Proportion Indicators
(NADC Region as % of Alberta)

Fiscal year ending March 31		1999	2000	2001	2002	2003	2004	2005	2006
Natural gas and by-products royalty	natural gas production	39.9	39.4	38.2	38.2	37.4	38.2	38.2	38.2
Crude oil royalty	crude oil production	21.8	18.3	17.3	15.6	8.1	8.1	8.1	8.1
Synthetic crude oil and bitumen royalty	All to NADC	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Coal royalty	None to NADC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bonuses and sales of Crown leases	well counts	24.8	25.2	25.5	25.3	24.9	25.3	25.3	25.3
Rentals and fees	well counts	24.8	25.2	25.5	25.3	24.9	25.3	25.3	25.3
Royalty tax credit	well counts	24.8	25.2	25.5	25.3	24.9	25.3	25.3	25.3

Sources: Numbers from 1999 to 2003 are based on data from Alberta Energy; numbers from 2004 to 2005 are assumed to remain at 2003 levels.

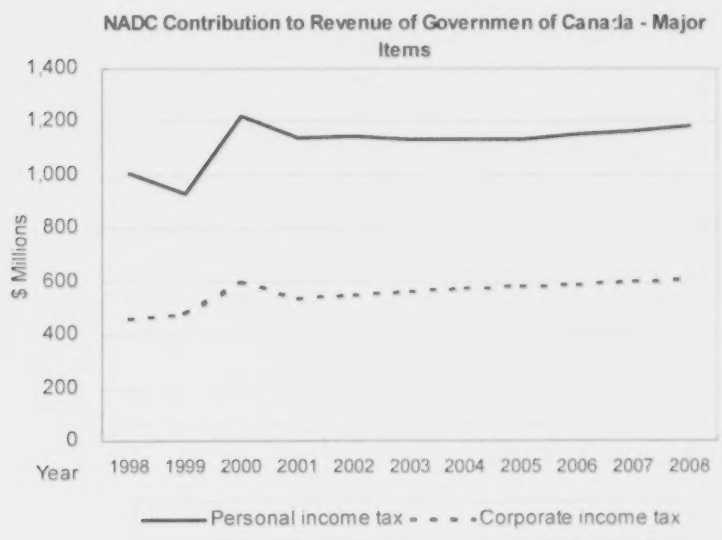
NADC Region's Contribution to Non-Renewable Resource Revenues of the Government of Alberta
($ Millions)

Years ending March 31	1999	2000	2001	2002	2003	2004	2005	2006
Natural gas and by-products royalty	586	962	2,753	1,538	1,716	1,328	1,014	919
Crude oil royalty	102	196	260	154	91	41	29	22
Synthetic crude oil and bitumen royalty	59	426	712	185	135	103	107	141
Coal royalty	0	0	0	0	0	0	0	0
Bonuses and sales of Crown leases	115	187	295	245	134	172	142	137
Rentals and fees	35	35	37	37	39	36	36	35
Royalty tax credit	-62	-47	-37	-28	-29	-36	-33	-32
Total	835	1,760	4,021	2,132	2,086	1,643	1,295	1,222
NADC Region as % of Alberta (Total)	35.3	37.8	38.0	34.2	32.5	34.4	34.9	36.1

Sources: Estimates by GTS Group International

6.3 NADC Region's Contribution to the Government of Canada

In 2000, the Government of Canada collected $20.9 billion revenue from Alberta, of which $2.7 billion (12.9% of total) were from the NADC Region. Personal income tax and corporate income tax were two major components of the NADC Region's contribution to the revenue of the Government of Canada.



Source: Statistics Canada, Provincial Economic Accounts and forecasts by GTS Group International.

Statistics Canada publishes the revenue of the Government of Canada in Alberta in the *Provincial Economic Accounts*. The contribution of the NADC Region to the revenue of the Government of Canada was estimated by applying a regional proportion indicator to each component of the federal revenue.

Regional proportion indicators include:

- Employment earnings for personal income tax
- Value added by industry for corporate income tax
- Population for withholding tax
- Population for contributions to social insurance plans
- Employment earnings for indirect taxes (including Goods and Services Tax)
- Population for other current transactions from persons
- Population for investment income

- Population from current transfers from provincial government

The NADC Region's contribution was larger than its percentage share of Alberta population because its contribution to federal corporate income tax was 17.6% of the total amount of federal corporate income tax collected in Alberta, compared to a population of 9.2%.

The contribution of the NADC Region to the revenue of the Government of Canada from 2001 to 2008 was forecast by extending a trend from 1993 to 2000, and applying the same set of regional proportion indicators as the estimates for 1998 to 2000.

Federal Government Revenue in Alberta
($ millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Personal income tax	9,462	9,359	10,470	9,688	9,910	10,108	10,288	10,452	10,602	10,742	10,872
Corporate income tax	2,661	3,187	3,412	3,056	3,126	3,189	3,246	3,297	3,345	3,389	3,430
Withholding tax from non-residents	191	230	254	222	228	232	236	240	243	247	250
Contributions to social insurance plans	1,814	1,757	1,803	1,782	1,822	1,859	1,892	1,922	1,950	1,975	1,999
Indirect taxes	3,959	4,026	4,291	4,063	4,156	4,239	4,314	4,383	4,446	4,505	4,559
(of which Goods and Services Tax)	2,566	2,760	3,017	2,759	2,822	2,879	2,930	2,977	3,020	3,059	3,096
Other current transfers from persons	2	1	2	0	0	0	0	0	0	0	0
Investment income	525	566	678	583	596	608	619	629	638	646	654
Current transfers from provincial governments	34	33	32	33	34	34	35	36	36	37	37
Total revenue	18,648	19,159	20,942	19,430	19,875	20,273	20,633	20,962	21,264	21,544	21,805

Sources: Federal revenue from 1998 to 2000 is from Statistics Canada, *Provincial Economic Accounts*; Others are forecasts by GTS Group International

Contribution of the Northern Alberta Development Council Region to the Revenue of the Federal Governmen
($ Millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Personal income tax	1,008	926	1,221	1,138	1,148	1,131	1,134	1,135	1,152	1,167	1,181
Corporate income tax	457	480	600	538	550	562	571	580	588	596	603
Withholding tax from non-residents	17	21	23	20	21	21	22	22	22	22	23
Contributions to social insurance plans	151	152	156	154	157	160	163	166	168	170	173
Indirect taxes	329	347	370	351	359	366	372	378	384	389	393
(of which Goods and Services Tax)	213	238	260	238	244	248	253	257	261	264	267
Other current transfers from persons	0	0	0	0	0	0	0	0	0	0	0
Investment income	48	52	62	53	54	55	56	57	58	59	60
Current transfers from provincial governments	3	3	3	3	3	3	3	3	3	3	3
Total revenue	2,227	2,219	2,696	2,494	2,536	2,547	2,575	2,599	2,636	2,671	2,703

Source: Estimates by GTS Group International

NADC Region's Percentage of Alberta

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Personal income tax	10.7	9.9	11.7	11.7	11.6	11.2	11.0	10.9	10.9	10.9	10.9
Corporate income tax	17.2	15.1	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
Withholding tax from non-residents	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Contributions to social insurance plans	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Indirect taxes	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
(of which Goods and Services Tax)	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Other current transfers from persons	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Investment income	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Current transfers from provincial governments	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Total revenue	11.9	11.6	12.9	12.8	12.8	12.6	12.5	12.4	12.4	12.4	12.4

Sources: Federal revenue from 1998 to 2000 is from *Statistics Canada, Provincial Economic Accounts* ; Others are forecasts by GTS Group International

7.0 NADC Region's Relative Economic Contribution to Alberta and Canada

The NADC Region has a small population over its vast land area. Meanwhile, its land is a major centre of primary agriculture, forest products, and conventional oil, non-conventional oil and natural gas activity.

These resource-based industries contribute dramatically to Alberta's exports and investment. Primary agricultural, forestry, and energy products are directly exported to the rest of Alberta, the rest of Canada and the rest of world. They also supply materials for manufacturing industries located outside of the NAD Region.

Resource development in the NADC Region attracts a vast amount of investment to the NADC Region. The process of investment creates huge demand for construction materials and labour and machinery and equipment for the suppliers located outside of the NADC Region.

Some indicators for the total and relative size of NADC contribution to Alberta and Canada are summarized in the table below.

From the table, we can see that the NADC Region holds a significant position in Alberta's economy and that its contribution extends to the rest of Canada and to the rest of world. The NADC Region is expected to maintain its important economic role in Alberta and Canada in the future.

Estimates of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Economic Contributions	Year	Total Contributions ($ Billions)			Value Per Person ($ Thousands)		
		NADC Region	Rest of Alberta	NADC as % of Alberta	NADC Region	Rest of Alberta	Alberta Average
International exports	2002	16.1	33.0	32.7	57.3	12.2	16.4
Interprovincial exports	2001	5.3	16.0	24.8	19.4	6.1	7.3
Investment	2002	11.9	29.6	28.6	42.4	10.9	13.9
Revenue of Alberta government	2003*	3.8	18.8	16.7	13.4	6.9	7.6
Revenue of federal government	2000	2.7	18.2	12.9	9.9	7.0	7.3

Sources: Alberta statistics are actual and others are estimates by GTS Group International

* The year ending March 31, 2003

Forecasts of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Economic Contributions	Year	Total Contributions ($ Billions)			Value Per Person ($ Thousands)		
		NADC Region	Rest of Alberta	NADC as % of Alberta	NADC Region	Rest of Alberta	Alberta Average
International exports	2008	18.9	38.1	33.1	62.2	13.0	17.6
Interprovincial exports	2008	4.9	14.5	25.4	16.3	4.9	6.0
Investment	2008	12.1	31.5	27.7	39.8	10.8	13.5
Revenue of Alberta government	2006*	3.2	18.8	14.4	10.4	6.7	7.0
Revenue of federal government	2008	2.7	19.1	12.4	8.9	6.5	6.8

Sources: Alberta statistics are actual and others are estimates by GTS Group International

*The year ending March 31, 2006.

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Appendix A: Statistical Tables

Table 1.1
Alberta Population in the Northern Alberta Development Region Communities and All Communities in Alberta
As Reported in Municipal Profiles

Communities	1999	2000	2001	2002
In the NADC Region	256,503	272,232	272,232	280,349
In the Rest of Alberta	2,556,319	2,601,114	2,629,706	2,707,843
In Alberta	2,812,822	2,873,346	2,901,938	2,988,192

Percentage Distribution				
	1999	2000	2001	2002
In the NADC Region	9.1	9.5	9.4	9.4
In the Rest of Alberta	90.9	90.5	90.6	90.6
In Alberta	100.0	100.0	100.0	100.0

Source: Compiled from Alberta Municipal Affairs, *Municipal Profiles*

Table 1.2
Total Gross Farm Receipts in the Northern Alberta Development Council Region and Alberta in 2000

Region	No. of Farms (counts)	Total Gross Farm Receipts ($ millions)
NADC Region	10,636	911
The Rest of Alberta	43,016	9,009
Alberta	53,652	9,919
NADC as % of Alberta	19.8	9.2

Source: Compiled from Statistics Canada, *2001 Census of Agriculture*

Table 1.3
Acres of Field Crops Grown in the Northern Alberta Development Region and Alberta, 2001

	Wheat		Barley	
Region	No. of Farms	Acres	No. of Farms	Acres
NADC Region	2,798	1,060,241	2,586	553,009
The Rest of Alberta	12,798	5,792,355	9,488	811,665
Alberta	15,596	6,852,596	12,074	1,364,674
NADC as % of Alberta	17.9	15.5	21.4	40.5

Source: Compiled from Statistics Canada, *2001 Census of Agriculture*

Table 1.4
Alfalfa and Canola Grown in the Northern Alberta Development Council Region and Alberta, 2001

Region	Alfalfa		Canola	
	No. of Farms	Acres	No. of Farms	Acres
NADC Region	4,864	1,097,887	2,242	767,168
The Rest of Alberta	12,608	2,817,720	6,920	1,893,341
Alberta	17,472	3,915,607	9,162	2,660,509
NADC as % of Alberta	27.8	28.0	24.5	28.8

Source: Compiled from Statistics Canada, *2001 Census of Agriculture*

Table 1.5
Cattle and Calves in the Northern Alberta Development Council Region and Alberta, 2001

Region	Cattle and Calves		Pigs	
	No. of Farms	Head	No. of Farms	Head
NADC Region	2,292	349,810	557	75,366
The Rest of Alberta	29,482	6,265,391	2,120	1,952,167
Alberta	31,774	6,615,201	2,677	2,027,533
NADC as % of Alberta	7.2	5.3	20.8	3.7

Source: Compiled from Statistics Canada, *2001 Census of Agriculture*

Table 1.6
Annual Production of Oil, Gas, and condensate in Alberta

Year	Average monthly well Count	Volume of natural gas (e3m3)	Volume of oil (m3)	Volume of CND (m3)
1990	50,653	118,581,141	60,804,587	130,455
1991	51,831	122,883,911	59,114,355	162,376
1992	53,429	134,241,491	60,460,222	187,077
1993	56,650	145,774,393	62,130,416	229,925
1994	59,927	155,982,735	62,828,375	268,046
1995	63,499	162,134,777	63,715,513	308,513
1996	66,682	167,767,259	64,283,903	319,452
1997	71,536	168,784,501	66,879,007	371,224
1998	74,213	172,778,021	66,085,294	380,767
1999	76,742	175,211,978	59,709,165	397,992
2000	84,982	176,357,593	60,203,165	441,895
2001	93,894	174,023,651	59,633,862	458,988
2002	98,807	169,487,133	55,730,063	449,661

Source: Compiled from data available at Alberta Energy

Table 1.7
Annual Production of Oil, Gas, and Condensate
in the Northern Alberta Development Council Region

Year	Average monthly well Count	Volume of natural gas (e3m3)	Volume of oil (m3)	Volume of CND (m3)
1990	9,901	38,796,171	28,485,906	31,557
1991	10,116	41,819,283	27,121,415	51,698
1992	10,431	47,240,233	27,499,799	60,898
1993	11,278	53,470,163	27,409,839	69,308
1994	12,378	57,708,761	27,402,528	82,773
1995	13,726	62,266,622	27,736,047	99,016
1996	15,046	66,045,982	27,722,197	93,874
1997	17,238	67,571,751	30,688,858	128,212
1998	18,399	68,975,371	32,349,481	120,867
1999	19,316	69,064,706	29,940,709	124,742
2000	21,666	67,431,226	30,421,231	139,318
2001	23,771	66,395,982	31,034,075	144,313
2002	24,635	63,450,228	29,190,985	142,327

Source: Compiled from data available at Alberta Energy

Table 1.8
Annual Production of Oil, Gas, and Condensate
The Northern Alberta Development Council Region as a Percent of Alberta

Year	Average monthly well Count	Volume of natural gas	Volume of oil	Volume of CND
1990	19.5	32.7	46.8	24.2
1991	19.5	34.0	45.9	31.8
1992	19.5	35.2	45.5	32.6
1993	19.9	36.7	44.1	30.1
1994	20.7	37.0	43.6	30.9
1995	21.6	38.4	43.5	32.1
1996	22.6	39.4	43.1	29.4
1997	24.1	40.0	45.9	34.5
1998	24.8	39.9	49.0	31.7
1999	25.2	39.4	50.1	31.3
2000	25.5	38.2	50.5	31.5
2001	25.3	38.2	52.0	31.4
2002	24.9	37.4	52.4	31.7

Source: Compiled from data available at Alberta Energy

Table 1.9
Manufacturing Industries in the Northern Development Council Region and Alberta

	Units of Measurement	1998 Alberta	1998 NADC Region	1999 Alberta	1999 NADC Region
Number of establishments	Counts	2,629	147	2,481	132
Production and related workers					
Number of workers	Counts	92,280	6,321	89,685	6,210
Person hours paid	Thousands	196,024	13,542	188,889	13,321
Wages and salaries	$ Millions	3,207	289	3,106	295
Cost of fuel and electricity	$ Millions	770	89	884	98
Cost of materials and supplies used	$ Millions	19,468	1,106	21,240	1,095
Value of shipments of goods of own manufacturing	$ Millions	32,841	2,219	34,823	2,397
Value added	$ Millions	12,571	1,025	13,415	1,211
Administrative, office and other non-manufacturing employees					
Number of workers	Counts	24,215	1,126	23,618	1,059
Salaries and wages	$ Millions	1,342	67	1,334	69
Total employees					
Number	Counts	116,495	7,447	113,303	7,269
Salaries and wages	$ Millions	45,490	3,562	44,396	3,641
Cost of materials, supplies and goods for resales	$ Millions	22,214	1,152	24,104	1,126
Value of shipments and other revenues	$ Millions	36,239	2,261	38,531	2,425
Value added	$ Millions	13,588	1,020	14,282	1,209

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

Table 1.10
Manufacturing Industries in the Northern Development Council Region
The NADC Region as a Percentage of Alberta

		1998	1999
Number of establishments	Counts	5.6	5.3
Production and related workers			
Number of workers	Counts	6.8	6.9
Person hours paid	Thousands	6.9	7.1
Wages and salaries	$ Millions	9.0	9.5
Cost of fuel and electricity	$ Millions	11.6	11.1
Cost of materials and supplies used	$ Millions	5.7	5.2
Value of shipments of goods of own mar	$ Millions	6.8	6.9
Value added	$ Millions	8.2	9.0
Administrative, office and other non-manufacturing employees			
Number of workers	Counts	4.7	4.5
Salaries and wages	$ Millions	5.0	5.2
Total employees			
Number	Counts	6.4	6.4
Salaries and wages	$ Millions	7.8	8.2
Cost of materials, supplies and goods fo	$ Millions	5.2	4.7
Value of shipments and other revenues	$ Millions	6.2	6.3
Value added	$ Millions	7.5	8.5

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Ind*

Table 1.11
Forest Products Industries as a Pecentage of All Manufacturing Industries in the Northern Alberta Development Council Region, 1998

		1998		
		All manufacturing industries in NADC	Forest products industries	Forest products industries as % of all
Number of establishments	Counts	147	31	21.1
Production and related workers				
Number of workers	Counts	6,321	3,732	59.0
Person hours paid	Thousands	13,542	13,543	60.6
Wages and salaries	$ Millions	289	179	61.8
Cost of fuel and electricity	$ Millions	89	67	74.9
Cost of materials and supplies used	$ Millions	1,106	682	61.7
Value of shipments of goods of own manufacturing	$ Millions	2,219	1,411	63.6
Value added	$ Millions	1,025	659	64.3
Administrative, office and other non-manufacturing employees				
Number of workers	Counts	1,126	516	45.8
Salaries and wages	$ Millions	67	31	45.8
Total employees				
Number	Counts	7,447	4,248	57.0
Salaries and wages	$ Millions	356	209	58.8
Cost of materials, supplies and goods for resales	$ Millions	1,152	693	60.1
Value of shipments and other revenues	$ Millions	2,261	1,417	62.7
Value added	$ Millions	1,020	654	64.1

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

Table 1.12
Forest Products Industries as a Percentage of All Manufacturing Industries in the Northern Alberta Development Council Region, 1999

		1999		
		All manufacturing industries in NADC	Forest products industries	Forest products industries as % of all
Number of establishments	Counts	132	29	22.0
Production and related workers				
Number of workers	Counts	6,210	2,893	46.6
Person hours paid	Thousands	13,321	6,306	47.3
Wages and salaries	$ Millions	295	144	48.9
Cost of fuel and electricity	$ Millions	98	68	68.9
Cost of materials and supplies used	$ Millions	1,095	501	45.8
Value of shipments of goods of own manufacturing	$ Millions	2,397	1,204	50.2
Value added	$ Millions	1,211	642	53.1
Administrative, office and other non-manufacturing employees				
Number of workers	Counts	7,269	3,278	36.4
Salaries and wages	$ Millions	69	26	38.2
Total employees				
Number	Counts	7	3	45.1
Salaries and wages	$ Millions	364	171	46.9
Cost of materials, supplies and goods for resales	$ Millions	1,126	503	44.7
Value of shipments and other revenues	$ Millions	2,425	1,206	49.7
Value added	$ Millions	1,209	641	53.1

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

Table 1.13
Labour Force by Industry in the Northern Alberta Development Council Region and Alberta, 2001
(Number of persons)

Industry	NADC Region	The Rest of Alberta	Albert	NADC as % of Alberta
Total Labour Force	146,340	1,535,645	1,681,985	8.7
Agriculture and other resource-based industries	33,940	150,165	184,105	18.4
Manufacturing and construction industries	21,250	243,690	264,940	8.0
Wholesale and retail trade	19,345	239,395	258,740	7.5
Finance and real estate	4,790	79,545	84,335	5.7
Health and education	21,310	237,740	259,050	8.2
Business services	18,720	297,545	316,265	5.9
Other services	26,980	287,565	314,545	8.6

Source: Compiled from Statistics Canada, *2001 Census Community Profiles*.

Table 1.14
Percentage Distribution of Labour Force by Industry, 2001

Industry	NADC Region	The Rest of Alberta
Total Labour Force	100.0	100.0
Agriculture and other resource-based industries	23.2	9.8
Manufacturing and construction industries	14.5	15.9
Wholesale and retail trade	13.2	15.6
Finance and real estate	3.3	5.2
Health and education	14.6	15.5
Business services	12.8	19.4
Other services	18.4	18.7

Source: Compiled from Statistics Canada, *2001 Census Community Profiles*.

Table 2.1
Alberta's Trade Balance
($ Million)

	1998	1999	2000	2001
Exports out of Alberta	57,222	63,845	87,051	90,909
Interprovincial exports	22,238	24,926	32,289	32,945
Animals	143	183	226	389
Minerals	4,292	5,732	9,491	9,439
Oil	1,756	2,254	3,090	2,022
Gas	1,962	2,708	4,787	5,928
Coal	19	10	3	12
Other	555	760	1,611	1,477
Manufacturing	9,258	9,589	11,544	11,500
Services	8,545	9,422	11,028	11,617
International exports	33,707	37,703	53,446	56,465
Animals	842	604	598	900
Minerals	16,054	18,748	32,643	35,321
Oil	6,822	7,824	13,296	12,516
Gas	8,039	9,665	17,580	21,569
Coal	590	497	347	367
Other	603	762	1,420	869
Manufacturing	9,347	10,428	11,729	11,335
Services	7,464	7,923	8,476	8,909
Total grains (interprovincial plus international)	1,277	1,216	1,316	1,499
Imports into Alberta	51,209	53,726	61,076	65,763
Trade balance (exports minus imports)	6,013	10,119	25,975	25,146
Gross Domestic Product at market prices	108,895	116,237	143,155	150,454
Interprovincial exports as % of GDP	20.4	21.4	22.6	21.9
International exports as % of GDP	31.0	32.4	37.3	37.5
Grain exports as % of GDP	1.2	1.0	0.9	1.0

Source:
Compiled from Alberta Revenue, *Alberta Economic Accounts 2001*.

Table 2.2
Alberta's Total Out-of-Province Exports
($ Millions)

	1998	1999	2000	2001	Average 1998-01	
					Amounts	% distribution
Animals and grains	2,262	2,003	2,140	2,788	2,298	3.1
Minerals	20,346	24,480	42,134	44,760	32,930	44.0
Oil	8,578	10,078	16,386	14,538	12,395	16.6
Gas	10,001	12,373	22,367	27,497	18,060	24.2
Coal	609	507	350	379	461	0.6
Other	1,158	1,522	3,031	2,346	2,014	2.7
Manufacturing	18,605	20,017	23,273	22,835	21,183	28.3
Services	16,009	17,345	19,504	20,526	18,346	24.5
Total	57,222	63,845	87,051	90,909	74,757	100.0

Source:
Compiled from Alberta Revenue, *Alberta Economic Accounts 2001*.

Table 2.3
Alberta Exports by Industry, 1996 to 2002
($ million)

Industry	1996	1997	1998	1999	2000	2001	2002
Primary Agriculture	3,304	3,147	2,830	2,381	2,704	3,001	2,243
Crops	2,462	2,398	2,012	1,798	2,053	2,122	1,472
Livestock	842	749	818	584	651	879	771
Primary Forestry, Fishing & Trapping	7	5	9	21	29	9	11
Mining & Energy	18,057	19,141	16,130	18,704	34,058	36,386	30,534
Crude Oil	8,149	8,483	6,714	7,679	14,879	12,612	12,666
Natural Gas & Natural Gas Liquids	9,007	9,741	8,570	10,097	18,484	22,999	17,389
Sulphur	311	312	239	264	256	138	148
Coal	555	564	544	594	379	393	276
Other Mining	35	42	61	70	54	40	46
Electricity	0	0	1	1	6	204	9
Manufacturing	9,813	10,709	11,435	12,798	17,704	16,666	15,526
Chemicals	2,811	2,784	2,384	2,564	3,488	3,751	3,431
Computer & Electronic Products	1,259	1,289	1,589	2,045	4,530	2,612	2,092
Electrical Equipment, Apple. & Comp.	69	78	109	135	187	248	192
Fabricated Metal Products	190	219	272	275	322	344	335
Food, Feed, Beverages	1,373	1,687	1,850	2,100	2,532	3,002	2,850
Furniture & Allied Products	192	255	302	341	410	350	318
Machinery (excl. Electric/Transport)	558	611	943	649	908	1,268	1,237
Non-Metallic Mineral Products	67	85	99	136	164	149	142
Paper Products & Wood Pulp	975	1,253	1,401	1,503	1,878	1,577	1,497
Plastics	94	139	181	217	246	244	259
Primary Metal Products	526	564	474	428	434	451	595
Refined Petroleum & Coal Products	468	398	337	429	805	628	528
Transportation Equipment	133	118	171	323	348	597	615
Wood Products	975	1,100	1,178	1,520	1,310	1,297	1,316
Other Manufacturing	124	129	148	135	142	150	119
Other Exports	518	480	606	702	836	804	794
Total Goods Exports	31,698	33,482	31,010	34,605	55,332	56,865	49,108
Travel & Tourism	1,098	970	1,197	1,306	1,454	1,300	
Commercial & Transportation Services	2,886	3,181	3,763	3,820	4,279	4,182	
Total Services Exports	3,984	4,151	4,960	5,126	5,733	5,482	
Total Exports	35,683	37,632	35,943	39,731	61,065	62,346	

Source: Alberta Economic Development, *Alberta International Trade Review 2001*

Table 2.4
International Exports of Major Primary Agricultural Products
($ Millions)

NADC Region (Estimates)

Products	1998	1999	2000	2001	2002
Cattle, live	36.9	24.7	27.1	37.7	33.6
Swine, live	3.2	2.7	3.4	4.6	3.5
Sub-total	40.0	27.4	30.6	42.3	37.1
Wheat (other than Durum Wheat)	132.4	114.5	146.8	151.5	103.2
Barley	44.6	39.0	49.7	51.3	34.9
Canola	142.8	111.2	113.5	127.1	90.8
Forage products (hay, alfalfa)	24.9	16.7	21.3	22.5	21.3
Sub-total	344.7	281.3	331.2	352.4	250.2
Total	384.8	308.7	361.7	394.7	287.3

Source: Estimates by GTS Group International

Alberta

Products	1998	1999	2000	2001	2002
Cattle, live	696.9	466.8	513.1	712.7	635.2
Swine, live	86.0	72.7	92.4	123.7	93.7
Sub-total	782.8	539.5	605.5	836.4	728.9
Wheat (other than Durum Wheat)	855.9	739.9	948.5	979 0	666.9
Barley	110.0	96.2	122.5	126.5	86.2
Canola	495.2	385.6	393.6	440.9	314.8
Forage products (hay, alfalfa)	88.9	59.5	75.9	80.4	76.2
Sub-total	1,550.0	1,281.1	1,540.5	1,626.9	1,144.1
Total	2,332.8	1,820.6	2,146.0	2,463.2	1,873.0

Sources:
Compiled from Alberta Economic Development, *Alberta International Trade Review, 2001 and Alberta International Trade Review, January to December 2002.*

Percentage of NADC out of Alberta

Products	1998	1999	2000	2001	2002
Cattle, live	5.3	5.3	5.3	5.3	5.3
Swine, live	3.7	3.7	3.7	3.7	3.7
Sub-total	5.1	5.1	5.0	5.1	5.1
Wheat (other than Durum Wheat)	15.5	15.5	15.5	15.5	15.5
Barley	40.5	40.5	40.5	40.5	40.5
Canola	28.8	28.8	28.8	28.8	28.8
Forage products (hay, alfalfa)	28.0	28.0	28.0	28.0	28.0
Sub-total	22.2	22.0	21.5	21.7	21.9
Total	16.5	17.0	16.9	16.0	15.3

Table 2.5
Forecasts of International Exports of Major Primary Agricultural Products
($ Millions)

NADC Region	2003	2004	2005	2006	2007	2008
Cattle and swine, live	36	34	33	32	32	31
Wheat (other than Durum wheat, barley, canola, forage)	243	243	243	244	244	244
Alberta						
Cattle and swine, live	698	675	654	635	618	603
Wheat (other than Durum wheat, barley, canola, forage)	1,105	1,106	1,107	1,107	1,108	1,109

Source: Forecasts by GTS Group International

Table 2.6
International Exports of Major Primary Energy Products
($ Millions)

	1998	1999	2000	2001	2002
NADC Region					
Natural gas	3,172.1	3,829.4	6,552.0	8,255.7	6,062.1
Crude petroleum	3,286.7	3,874.2	7,518.4	6,563.5	6,634.5
Petroleum gases, liquefied:	198.2	136.0	425.0	427.9	378.4
Total	6,656.9	7,839.5	14,495.4	15,247.1	13,075.1
Alberta					
Natural gas	7,945.8	9,714.8	17,135.9	21,638.2	16,193.0
Crude petroleum	6,714.2	7,726.1	14,878.8	12,612.3	12,666.3
Petroleum gases, liquefied:	624.3	433.8	1,348.0	1,360.9	1,195.6
Total	15,284.3	17,874.7	33,362.7	35,611.3	30,054.9
NADC as a Percentage of Alberta (%)					
Natural gas	39.9	39.4	38.2	38.2	37.4
Crude petroleum	49.0	50.1	50.5	52.0	52.4
Petroleum gases, liquefied:	31.7	31.3	31.5	31.4	31.7
Total	43.6	43.9	43.4	42.8	43.5

Sources:
Exports from the NADC region are estimated by GTS Group International. Alberta exports are compiled from Alberta Economic Development, *Alberta International Review 2001*, and *Alberta International Trade Review, January to December, 2002*

Table 2.7
Forecasts of International Exports of Major Primary Energy Products
($ Millions)

	2003	2004	2005	2006	2007	2008
NADC Region						
Natural gas	6,193	6,239	6,285	6,329	6,372	6,413
Crude petroleum	7,251	7,554	7,852	8,146	8,437	8,727
Petroleum gases, liquefied:	383	389	394	399	404	408
Total	13,827	14,182	14,531	14,874	15,213	15,548
Alberta						
Natural gas	16,459	16,705	16,933	17,148	17,349	17,539
Crude petroleum	13,888	14,361	14,834	15,307	15,780	16,252
Petroleum gases, liquefied:	1,215	1,233	1,250	1,266	1,281	1,295
Total	31,562	32,299	33,018	33,720	34,409	35,086

Source: Forecasts by GTS Group International

Table 2.8
International Exports of Major Forest Products
($ Millions)

	1998	1999	2000	2001	2002
NADC Region					
Paper Products & Wood Pulp	1,114	1,195	1,494	1,255	1,190
Wood Products	478	597	497	495	473
Lumber	478	597	497	495	473
Other	346	465	417	410	444
Total	1,938	2,257	2,408	2,160	2,108
Alberta					
Paper Products & Wood Pulp	1,401	1,503	1,878	1,577	1,497
Wood Products	1,178	1,520	1,310	1,297	1,316
Lumber	665	831	692	689	659
Other	513	689	618	608	657
Total	2,578	3,023	3,188	2,874	2,813
NADC as a Percentage of Alberta (%)					
Paper Products & Wood Pulp	79.6	79.6	79.6	79.6	79.6
Wood Products	40.6	39.3	37.9	38.2	36.0
Lumber	71.8	71.8	71.8	71.8	71.8
Other	67.5	67.5	67.5	67.5	67.5
Total	75.2	74.7	75.5	75.1	74.9

Sources:
Alberta exports are compiled from Alberta Economic Development, *Alberta International Trade Review 2001* and *Alberta International Trade Review January to December 2002*.
NADC percentages are calculated from data in Alberta Forest Products Association, *Alberta Forest Products Industries - Overview Economic Impact*, November 2001.

Table 2.9
Forecasts of International Exports of Paper, Pulp and Wood Products
($ Millions)

	2003	2004	2005	2006	2007	2008
NADC Region	2,122	2,172	2,217	2,256	2,292	2,325
Alberta	2,824	2,890	2,949	3,002	3,050	3,094

Source: Forecasts by GTS Group International

Table 2.10
Interprovincial Trade of Oil and Natural Gas
($ Millions)

	1998	1999	2000	2001
Alberta				
Oil	1,756	2,254	3,090	2,022
Natural gas	1,962	2,708	4,787	5,928
Total	3,718	4,962	7,877	7,950
NADC Region (Estimates)				
Oil	860	1,130	1,561	1,052
Natural gas	783	1,067	1,830	2,262
Total	1,643	2,198	3,392	3,314

Source: Estimates by GTS Group International

Table 2.11
Forecasts of Interprovincial Trade of Oil and Gas
($ Millions)

	2002	2003	2004	2005	2006	2007	2008
Alberta							
Oil	2,295	2,073	1,851	1,630	1,408	1,187	965
Natural gas	6,018	6,164	6,298	6,422	6,538	6,647	6,748
Total	8,312	8,237	8,149	8,052	7,946	7,833	7,713
NADC Region (Estimates)							
Oil	1,157	1,045	933	822	710	598	487
Natural gas	2,343	2,400	2,452	2,500	2,545	2,588	2,627
Total	3,500	3,445	3,385	3,322	3,255	3,186	3,114

Source: Forecasts by GTS Group International

Table 2.12

International Exports from the Northern Alberta Development Council Region for Selected Years

($ Millions)

	Alberta			NADC Region			NADC as % of Alberta		
	1998	2002	2008	1998	2002	2008	1998	2002	2008
Agriculture	2,830	2,243	2,070	431	321	308	15.2	14.3	14.9
Crops	2,012	1,472	1,436	388	280	274	19.3	19.1	19.1
Wheat, barley, canola, alfalfa	1,550	1,141	1,109	345	250	244	22.3	21.9	22.0
Other	462	331	327	43	30	30	9.2	9.2	9.2
Livestock	818	771	634	43	41	34	5.3	5.3	5.3
Cattle, calves, pigs	783	729	603	40	37	31	5.1	5.1	5.1
Other	35	42	31	3	4	3	9.2	9.2	9.2
Energy and Non-Energy Minerals	16,130	30,534	35,472	6,657	13,074	15,548	41.3	42.8	43.8
Crude oil	6,714	12,666	16,252	3,287	6,634	8,727	49.0	52.4	53.7
Natural gas and natural gas liquids	8,570	17,389	18,834	3,370	6,440	6,821	39.3	37.0	36.2
Other	846	479	386	0	0	0	0.0	0.0	0.0
Manufacturing	11,435	15,526	18,409	2,306	2,636	2,962	20.2	17.0	16.1
Paper, wood pulp and wood products	2,579	2,813	3,094	1,938	2,108	2,325	75.1	74.9	75.1
Others	8,856	12,713	15,315	368	528	637	4.2	4.2	4.2
Other exports	615	805	1,008	26	33	42	4.2	4.2	4.2
Total goods exports	33,840	49,108	56,959	9,419	16,065	18,859	27.8	32.7	33.1

Source: 1998 and 2002 Alberta exports are compiled form Alberta Economic Development, Alberta International Trade Review; others are estimates and forecasts by GTS Group International.

Table 2.13
Interprovincial Exports of Goods from the Northern Alberta Development Council Region
($ Millions)

	Alberta			NADC Region			NADC as % of Alberta		
	1998	2001	2008	1998	2001	2008	1998	2001	2008
Agriculture									
Livestock	147	356	597	8	19	32	5.3	5.3	5.3
Minerals	4,292	9,439	7,713	1,643	3,317	3,114			
Crude oil	1,756	2,022	965	860	1,052	487	49.0	52.0	50.5
Natural gas and natural gas liquids	1,962	5,928	6,748	783	2,265	2,627	39.9	38.2	38.9
Coal	19	12							
Other	928	924	926	0	0	0			
Manufacturing	9,258	11,500	11,079	1,870	1,955	1,784	20.2	17.0	16.1
Total	13,697	21,295	19,389	3,521	5,291	4,929	25.7	24.8	25.4

Sources: 1998 and 2001 Alberta exports are compiled from Alberta Revenue, *Alberta Economic Accounts;* others are estimates and forecasts by GTS Group International

Table 3.1
Major Capital Investment Projects in the Northern Alberta Development Council Region and Alberta as of May 2003
All Projects with More Than $2 Million Expenditures
($ Millions)

Industry	NADC Region		The Rest of Alberta		Alberta		NADC as % of Alberta	
	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects
Agriculture & Related	3	15	16	212	19	228	15.8	6.7
Chemicals & Petrochemicals	1	31	2	215	3	246	33.3	12.5
Commercial/Retail	5	63	80	2,071	85	2,134	5.9	3.0
Commercial/Retail and Residential	1	2	6	709	7	711	14.3	0.3
Forestry & Related	5	271	1	5	6	276	83.3	98.3
Infrastructure	52	637	153	6,734	205	7,372	25.4	8.6
Institutional	28	455	211	3,939	239	4,393	11.7	10.4
Manufacturing	0	0	2	55	2	55	0.0	0.0
Mining	1	30	1	10	2	40	50.0	75.4
Oil, Gas & Oilsands	42	43,587	13	7,705	55	51,292	76.4	85.0
Other Industrial	2	7	16	118	18	125	11.1	5.3
Pipelines	10	1,454	8	1,144	18	2,598	55.6	56.0
Power	4	1,771	13	2,670	17	4,441	23.5	39.9
Residential	4	33	108	1,390	112	1,422	3.6	2.3
Telecommunications	0	0	1	300	1	300	0.0	0.0
Tourism/Recreation	16	125	105	3,132	121	3,257	13.2	3.8
Total	174	48,480	736	30,408	910	78,888	19.1	61.5

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003,* June 2003.
Notes: Include all projects with more than $ 2 million expenditures that:
(1) were completed in 2002
(2) are currently under construction
(3) have been announced
(4) have been proposed

Table 3.2
Major Capital Investment Projects in the Northern Alberta Development Council Region and Alberta as of May 2003
Large-Scale Projects with More Than $100 Million Expenditures
($ Millions)

Industry	NADC Region		The Rest of Alberta		Alberta		NADC as % of Alberta	
	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects
1 Agriculture & Related	0	0	0	0	0	0		
2 Chemicals & Petrochemicals	0	0	1	200	1	200	0.0	0.0
3 Commercial/Retail	0	0	4	1,050	4	1,050	0.0	0.0
4 Commercial/Retail and Residential	0	0	3	670	3	670	0.0	0.0
5 Forestry & Related	0	0	0	0	0	0		
6 Infrastructure	1	200	9	4,150	10	4,350	11.1	4.6
7 Institutional	1	200	10	1,519	11	1,719	10.0	11.6
8 Manufacturing	0	0	0	0	0	0		
9 Mining	0	0	0	0	0	0		
10 Oil, Gas & Oilsands	33	43,254	8	7,580	41	50,834	80.5	85.1
11 Other Industrial	0	0	0	0	0	0		
12 Pipelines	3	1,131	1	1,000	4	2,131	75.0	53.1
13 Power	2	1,635	3	2,250	5	3,885	40.0	42.1
14 Residential	0	0	2	325	2	325	0.0	0.0
15 Telecommunications	0	0	1	300	1	300	0.0	0.0
16 Tourism/Recreation	0	0	8	2,018	8	2,018	0.0	0.0
Total	40	46,420	50	21,062	90	67481.6	44.4	68.8

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003*, June 2003.
Notes: Include all projects with more than $ 100 million expenditures that:
(1) were completed in 2002
(2) are currently under construction
(3) have been announced
(4) have been proposed

Table 3.3

Major Capital Investment Projects in the Northern Alberta Development Council Region and Alberta as of May 2003

Projects with More Than $2 Million Expenditures Either Completed in 2002 or Currently Under Construction

($ Millions)

Industry	NADC Region		The Rest of Alberta		Alberta		NADC as % of Alberta	
	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects
1 Agriculture & Related	1	7	5	59	6	66	16.7	10.6
2 Chemicals & Petrochemicals	1	31	0	0	1	31	100.0	100.0
3 Commercial/Retail	0	0	43	779	43	779	0.0	0.0
4 Commercial/Retail and Residential	0	0	1	10	1	10	0.0	0.0
5 Forestry & Related	0	0	0	0	0	0		
6 Infrastructure	8	105	42	4,087	50	4,192	16.0	2.5
7 Institutional	8	62	82	1,440	90	1,501	8.9	4.1
8 Manufacturing	0	0	0	0	0	0		
9 Mining	0	0	0	0	0	0		
10 Oil, Gas & Oilsands	10	9,471	6	3,240	16	12,711	62.5	74.5
11 Other Industrial	0	0	6	54	6	54	0.0	0.0
12 Pipelines	2	268	1	1,000	3	1,268	66.7	21.1
13 Power	2	181	3	753	5	934	40.0	19.4
14 Residential	3	29	48	633	51	662	5.9	4.4
15 Telecommunications	0	0	1	300	1	300	0.0	0.0
16 Tourism/Recreation	1	9	26	653	27	661	3.7	1.3
Total	36	10,162	264	13,007	300	23,169	12.0	43.9

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003,* June 2003.

Notes: Include all projects with more than $ 2 million expenditures that:

(1) were completed in 2002

(2) are currently under construction

Table 3.4

Major Capital Investment Projects in the Northern Alberta Development Council Region and Alberta as of May 2003

Projects with More Than $100 Million Expenditures That have Been Either Announced or Proposed

($ Millions)

Industry	NADC Region		The Rest of Alberta		Alberta		NADC as % of Alberta	
	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects	No. of Projects	Value of Projects
1 Agriculture & Related	0	0	0	0	0	0		
2 Chemicals & Petrochemicals	0	0	1	200	1	200	0.0	0.0
3 Commercial/Retail	0	0	3	800	3	800	0.0	0.0
4 Commercial/Retail and Residential	0	0	3	670	3	670	0.0	0.0
5 Forestry & Related	0	0	0	0	0	0		
6 Infrastructure	1	200	3	903	4	1,103	25.0	22.1
7 Institutional	1	200	6	937.8	7	1,138	14.3	21.3
8 Manufacturing	0	0	0	0	0	0		
9 Mining	0	0	0	0	0	0		
10 Oil, Gas & Oilsands	26	33929	3	4400	29	38,329	89.7	88.5
11 Other Industrial	0	0	0	0	0	0		
12 Pipelines	2	943	0	0	2	943	100.0	100.0
13 Power	1	1500	2	1650	3	3,150	33.3	47.6
14 Residential	0	0	1	200	1	200	0.0	0.0
15 Telecommunications	0	0	0	0	0	0		
16 Tourism/Recreation	0	0	6	1598	6	1,598	0.0	0.0
Total	31	36772	28	11358.8	59	48130.8	52.5	76.4

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003,* June 2003.

Notes: Include all projects with more than $ 100 million expenditures that:

(1) have been announced

(2) have been proposed

Table 3.5
Estimates of Total Investment in 2003 and Beyond for Selected Industries Including Projects Under-construction, Announced and Proposed
($ Millions)

	Industries	Investment
NADC Region		
	Oil, gas and oilsands	39,730
	Pipeline	1,303
	Power utilities	1,681
	Total	42,714
The Rest of Alberta	Oil, gas and oilsands	7,118
	Pipeline	344
	Power utilities	3,864
	Total	11,326
Alberta	Oil, gas and oilsands	46,848
	Pipeline	1,647
	Power utilities	5,545
	Total	54,040
NADC Percentage of Alberta	Oil, gas and oilsands	84.8
	Pipeline	79.1
	Power utilities	30.3
	Total	79.0

Source:
Estimated by GTS Group International from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003*.
Notes:
Include all projects under-construction, announced, and proposed.

Table 3.6
Estimates of Total Investment in 2003 and Beyond
for Selected Industries
Including Proposed Projects Only

($ Millions)

	Industries	Investment
NADC Region		
	Oil, gas and oilsands	30,718
	Pipeline	153
	Power utilities	1,500
	Total	32,370
The Rest of Alberta	Oil, gas and oilsands	4,406
	Pipeline	144
	Power utilities	1,767
	Total	6,317
Alberta	Oil, gas and oilsands	35,124
	Pipeline	297
	Power utilities	3,267
	Total	38,687
NADC Percentage of Alberta	Oil, gas and oilsands	87.5
	Pipeline	51.5
	Power utilities	45.9
	Total	83.7

Source:
Estimated by GTS Group International from Alberta Economic Development, *Inventory of Major Alberta Projects, May 2003*.
Notes:
Include proposed projects only.

Table 3.7
Private and Public Investment in Alberta
($ millions)

Industry	Capital expenditures			Repair expenditures	Total	Average annual capital expenditures	
	2001	2002	2003	2001	2001	Annual average 2001-2003	% distribution
Agriculture and Forestry	1,121	1,102	1,096	694	1,814	1,106	2.7
Forestry and logging	33	30	26	84	117	30	0.1
Mining and oil and gas extraction	20,012	18,384	16,475	1,340	21,352	18,290	44.8
Oil and gas extraction	19,087	17,773	15,780	1,039	20,125	17,547	43.0
Other mining	93	113	123	145	237	110	0.3
Support activities	833	498	572	301	1,134	634	1.6
Utilities	1,466	1,798	1,583	352	1,818	1,616	4.0
Construction	155	160	165	122	277	160	0.4
Manufacturing	1,759	1,348	1,209	835	2,594	1,439	3.5
Chemicals	434	371	383	164	597	396	1.0
Petroleum and coal products	299	261	163	73	372	241	0.6
Wholesale trade	123	68	110	98	221	101	0.2
Retail trade	616	674	762	96	712	684	1.7
Transportation and warehousing	1,839	2,319	2,517	806	2,645	2,225	5.5
Information and culture	1,907	1,507	1,420	71	1,978	1,611	3.9
Finance and insurance	1,127	867	913	29	1,157	969	2.4
Real estate and rental and lease services	1,180	1,047	1,085	133	1,313	1,104	2.7
Professional, scientific and technical services	329	370	349	40	370	349	0.9
Management services	33	20	23	10	43	26	0.1
Waste services	91	87	100	44	135	93	0.2
Education services	592	1,061	691	165	758	782	1.9
Health care and social assistance services	614	611	552	133	746	592	1.5
Arts and entertainment	101	142	265	34	135	169	0.4
Accommodation and food services	208	232	249	104	311	230	0.6
Other services	148	151	147	57	205	149	0.4
Public administration	2,037	1,930	1,892	233	2,270	1,953	4.8
Federal	254	285	270	37	291	270	0.7
Provincial	640	390	338	7	646	456	1.1
Local	1,143	1,254	1,285	189	1,333	1,227	3.0
Housing	5,867	7,259	7,289	569	6,436	6,805	16.7
Total	41,698	41,500	39,271	6,012	47,710	40,823	100.0

Source: Statistics Canada, *Private and Public Investment in Canada, Intentions 2003*
Notes: Actual expenditures in 2001; preliminary actual expenditures in 2002; and investment intentions in 2003.

Table 3.8
Capital Expenditure Intentions in Alberta, 2003
Distribution between Construction and Machinery and Equipment Expenditures

Industry	Value of investment ($ millions)			% distribution	
	Construction	Machinery and Equipment	Total	Construction	Machinery and Equipment
Agriculture and Forestry	229	867	1,096	20.9	79.1
Forestry and logging	26		26		
Mining and oil and gas extraction	12,530	3,946	16,475	76.1	23.9
Oil and gas extraction	12,373	3,407	15,780	78.4	21.6
Other mining	63	60	123	51.1	48.9
Support activities	93	479	572	16.3	83.7
Utilities	832	751	1,583	52.6	47.4
Construction	19	146	165	11.5	88.5
Manufacturing	167	1,042	1,209	13.8	86.2
Chemicals	75	308	383	19.5	80.5
Petroleum and coal products	163		163		
Wholesale trade	110	378	489	22.6	77.4
Retail trade	337	425	762	44.2	55.8
Transportation and warehousing	652	1,866	2,517	25.9	74.1
Information and culture	260	1,160	1,420	18.3	81.7
Finance and insurance	39	875	913	4.2	95.8
Real estate and rental and lease services	192	893	1,085	17.7	82.3
Professional, scientific and technical services	39	310	349	11.1	88.9
Management services	7	17	23	28.2	71.8
Waste services	18	82	100	17.7	82.3
Education services	503	188	691	72.8	27.2
Health care and social assistance services	295	257	552	53.4	46.6
Arts and entertainment	62	203	265	23.3	76.7
Accommodation and food services	150	100	249	60.1	39.9
Other services	54	93	147	36.7	63.3
Public administration	1,407	486	1,892	74.3	25.7
Federal	270		270		
Provincial	338		338		
Local	1,064	220	1,285	82.9	17.1
Housing	7,289		7,289	100.0	0.0
Total	25,187	14,084	39,271	64.1	35.9

Source: Statistics Canada, *Private and Public Investment in Canada, Intentions 2003*

Table 3.9
Capital Investment in Alberta
($ Millions)

	1998	1999	2000	2001	2002	2003
NADC Region						
Agriculture	101	73	72	100	98	98
Oil sands	1,530	2,420	4,220	5,910	5,515	4,943
Conventional oil and gas	2,683	2,076	3,011	3,570	4,247	3,817
Manufacturing	151	144	162	111	85	76
All other industries	1,496	1,455	1,613	1,767	1,942	1,929
Total	5,960	6,168	9,078	11,458	11,887	10,862
NADC Region Total as a Percentage of Alberta Total	18.5	20.8	24.9	27.5	28.6	27.7
Alberta						
Agriculture	1,097	797	783	1,088	1,072	1,071
Oil Sands	1,530	2,420	4,220	5,910	5,515	4,943
Conventional oil and gas	10,821	8,246	11,812	14,102	17,036	15,266
Manufacturing	2,397	2,295	2,575	1,759	1,348	1,209
All other industries	16,439	15,957	17,025	18,839	20,697	20,516
Total	32,284	29,715	36,415	41,698	41,500	39,271

Sources:
Investment in Alberta is compiled from Statistics Canada, *Private and Public Investment in Canada*, and Alberta Energy, *Alberta - A World Energy Centre, November 2001*, except investment in oil sans and conventional oil and gas in 2002 and 2003 which is an estimate by GTS Group International; Investment in the NADC region is an estimate by GTS Group International.

Table 3.10
Forecasts of Capital Investment in Alberta
($ Millions)

NADC Region					
Year	2004	2005	2006	2007	2008
Government	327	342	355	367	377
Business	11,074	11,258	11,417	11,557	11,682
Residential	658	672	684	694	704
Non-residential	10,322	10,483	10,622	10,744	10,854
Total	11,401	11,599	11,771	11,923	12,059

The Rest of Alberta					
Year	2004	2005	2006	2007	2008
Government	3,232	3,382	3,511	3,625	3,727
Business	26,344	26,781	27,159	27,492	27,791
Residential	6,509	6,645	6,763	6,867	6,960
Non-residential	19,929	20,239	20,507	20,744	20,955
Total	29,577	30,163	30,670	31,118	31,518

Alberta					
Year	2004	2005	2006	2007	2008
Government	3,559	3,724	3,866	3,992	4,104
Business	37,419	38,038	38,575	39,049	39,473
Residential	7,167	7,317	7,447	7,561	7,664
Non-residential	30,251	30,721	31,129	31,488	31,809
Total	40,978	41,762	42,442	43,041	43,577
NADC Region's Percentage of Alberta	27.8	27.8	27.7	27.7	27.7

Source: Forecasts by GTS Group International

Oil sands implied	6,241	6,260	6,277	6,292	6,306
Oil sands implied B	6,002	5,813	5,603	5,376	5,136

Table 3.11
Inventory of Alberta Major Projects as of May 2003
Projects Under Construction
($ Millions)

Industry	NADC Region		The Rest of Alberta	
	No. of projects	Value	No. of projects	Value
Agriculture & Related				
Chemicals & Petrochemicals				
Commercial/Retail			4	393
Commercial/Retail and Residential				
Forestry & Related				
Infrastructure	6	18	13	3,331
Institutional			5	302
Manufacturing				
Mining				
Oil, Gas & Oilsands	5	7,800	2	1,330
Other Industrial				
Pipelines	1	188		
Power			1	600
Residential			2	145
Telecommunications			1	300
Tourism/Recreation			7	496
All industries	12	8,006	35	6,897

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003*.

Table 3.12
Inventory of Alberta Major Projects as of May 2003
Projects Completed, Under Construction or Announced
($ Millions)

Industry	NADC Region		The Rest of Alberta	
	No. of projects	Value	No. of projects	Value
Agriculture & Related	1	7	8	79
Chemicals & Petrochemicals	1	31	1	15
Commercial/Retail	4	60	62	1,468
Commercial/Retail and Residential	0	0	4	289
Forestry & Related	2	130	1	5
Infrastructure	27	190	79	5,331
Institutional	15	140	132	2,435
Manufacturing	0	0	1	5
Mining	1	30	0	0
Oil, Gas & Oilsands	13	9,889	7	1,799
Other Industrial	0	0	8	77
Pipelines	5	1,301	1	1,000
Power	3	271	6	824
Residential	4	33	62	765
Telecommunications	0	0	5	380
Tourism/Recreation	1	9	44	842
All industries	77	12,090	421	15,313

Source: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003.*

Table 3.13
Inventory of Alberta Major Projects
Completed, Under-construction, or Announced in 2003
($ Millions)

NADC Region	Start Before 2003		End After 2003		Start 2003		End 2003		Start 2003		End 2004		Start 2003		End 2005		Start 2003		End After 2005		All periods	
Industry	No. of projects		Value		No. of projects		Value		No. of projects		Value		No. of projects		Value		No. of projects		Value		No. of projects		Value
Agriculture & Related																						
Chemicals & Petrochemicals					1		7														1	7
Commercial/Retail					1		31														1	31
Commercial/Retail and Residential									4		60										4	60
Forestry & Related		1		60																	0	0
Infrastructure		3		20		11		115	1		70										2	130
Institutional		1		35		7		51	9		29		3		17				1	9	27	190
Manufacturing									1		3		5		41		1		11		15	140
Mining																					0	0
Oil, Gas & Oilsands		5		7,800		5		721	1		30										1	30
Other Industrial									1		68						1		300		13	9,889
Pipelines		2		331		1		80												1	0	0
Power						1		135					1		90		1		800		5	1,301
Residential						3		29					2		136						3	271
Telecommunications									1		4										4	33
Tourism/Recreation																					0	0
All industries		12		8,245		30		1,169	1		9										1	9
		12		8,245		30		1,169	19		272		11		283		3		1,111		2	1,009	77	12,090

Sourec: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003*.

Table 3.14
Inventory of Alberta Major Projects
Completed, Under-construction, or Announced in 2003
($ Millions)

The Rest of Alberta	Start Before 2003	End After 2003	Start Before 2003	End 2003	Start 2003	End 2003	Start 2003	End 2004	Start 2003	End 2005	Start 2003	End After 2005	All periods	
Industry	No. of projects	Value	No. of projects	Value	No. of projects	Value	No. of projects	Value	No. of projects	Value	No. of projects	Value	No. of projects	Value
Agriculture & Related			2	51	4	20	2	8					8	79
Chemicals & Petrochemicals					1	15							1	15
Commercial/Retail	4	393	25	305	26	136	5	505	1	30	1	100	62	1,468
Commercial/Retail and Residential			1	10			1	19	1	10	1	250	4	289
Forestry & Related					1	5							1	5
Infrastructure	15	3,402	25	575	26	161	7	178	2	114	4	901	79	5,331
Institutional	7	451	62	836	26	126	28	516	8	286	1	220	132	2,435
Manufacturing					1	5							1	5
Mining													0	0
Oil, Gas & Oilsands	2	1,330	3	410	1	9	1	50					7	1,799
Other Industrial			4	32	4	45							8	77
Pipelines			1	1,000									1	1,000
Power	1	600	2	153	1	21	2	50					6	824
Residential	2	145	43	517	10	47	7	57					62	765
Telecommunications	1	300							4	80			5	380
Tourism/Recreation	8	504	14	74	15	82	7	181					44	842
All industries	40	7,125	182	3,962	116	671	60	1,563	16	520	7	1,471	421	15,313

Sourec: Compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003*.

Table 4.1
Revenue of Local Government in Alberta
for 1999, 2000, and 2001
($ millions)

NADC Region

Revenues of Municipal Governments
in the Northern Alberta Development Region
($)

Revenue sources	1999	2000	2001
Net property taxes	184	194	217
Total provincial grants	78	89	92
Other grants	4	3	11
User fees and sale of goods	50	54	56
Business taxes	1	1	0
Other	54	56	68
Sub-total	370	397	444
Actual education taxes	129	129	114
Total	499	526	558

Source: Compiled from Alberta Municipal Affairs, *Municipal Profiles*

The Rest of Alberta

Revenue sources	1999	2000	2001
Net property taxes	1,361	1,435	1,549
Total provincial grants	447	571	559
Other grants	24	25	36
User fees and sale of goods	2,675	2,138	2,816
Business taxes	198	206	216
Other	836	1,151	1,505
Sub-total	5,526	5,586	6,755
Actual education taxes	1,189	1,205	1,080
Total	6,715	6,791	7,835

Alberta as a whole

Revenue sources	1999	2000	2001
Net property taxes	1,545	1,630	1,766
Total provincial grants	525	659	651
Other grants	28	28	47
User fees and sale of goods	2,725	2,192	2,871
Business taxes	199	207	216
Other	889	1,206	1,574
Sub-total	5,896	5,983	7,199

Table 4.2
Estimates of the Contribution of the Northern Alberta Development Region
to the Revenue of the Government of Alberta
Fiscal Year 1998-1999
($ Millions)

Sources of Revenue	Alberta Actural revenue	NADC Region NADC proportion indicators	2001 indices (%)	NADC contribution
Income Tax				
Personal income tax	4,601	income	8.3	382
Corporate income tax	1,659	value added	13.8	285
Sub-total	6,260			667
Other Taxes				
School property tax	1,118	municipal school tax	9.78	109
Fuel tax	547	population	9.12	50
Tobacco tax	341	population	9.12	31
Freehold mineral rights tax	112	well counts	25.17	28
Insurance corporations tax	101	population	9.12	9
Hotel room tax	45	income	8.31	4
Financial institutions capital tax	32	value added	17.16	5
Sub-total	2,296			237
Non-Renewable Resource Revenue				
Natural gas and by-products royalty	1,467	gas production	39.90	585
Crude oil royalty	470	conventional oil production	21.80	102
Synthetic crude oil and bitumen royalty	59	all to NADC Region	100.00	59
Coal royalty	17		0.00	0
Bonuses and sales of Crown leases	463	well counts	24.80	115
Rentals and fees	142	well counts	24.80	35
Royalty tax credit	-250	well counts	24.80	-62
Sub-total	2,368			835
Transfers from Government of Canada				
Canada Health and Social Transfer	970	population	9.12	88
CHST-health supplement	0	population	9.12	0
Labour market development	83	population	9.12	8
Agriculture support programs	113	farm cash receipts	9.18	10
Other	169	population	9.12	15
Sub-total	1,335			122

Table 4.2 continue to the next page

Table 4.2 Continued from the previous page

Investment Income				
Alberta Heritage Savings Trust Fund	853	population	9.12	78
Endowment Funds Medical Research	119	population	9.12	11
Scholarship	39	population	9.12	4
Science and Engineering Research	0	population	9.12	0
Alberta Municipal Financing Corporation	464	population	9.12	42
Agriculture Financial Services Corporation	70	farm cash receipts	9.18	6
Other	59	population	9.12	5
Sub-total	1,604			146
Net Income from Commercial Operations				
Lottery revenue	776			
Liquor operations	485			
AlbertaTreasury Branches	111			
Other	14			
Sub-total	1,386	population	9.12	126
Premiums, Fees and Licences				
Health care insurance premiums	640	population	9.12	58
Motor vehicle licences	196	population	9.12	18
Timber rentals and fees	81	forest industry revenue	50.25	41
Crop and hail insurance premiums	75	cash farm receipts	9.18	7
Land titles	62	population	9.12	6
Other	237	population	9.12	22
Sub-total	1,291			151
Other				
Sale of capita lassets	15			
Alberta Dairy Control Board	59			
Finesandpenalties	39			
Miscellaneous	229			
Sub-total	342	population	9.12	31
Total Revenue	16,882			2,315

Sources:
Revenues of the Alberta government are compiled from Alberta Revenue, Alberta Budget.
NADC contributionis are estimated by GTS Group International.

Table 4.3
Estimates of the Contribution of the Northern Alberta Development Region to the Revenue of the Government of Alberta
Fiscal Year 2003-2004
($ Millions)

Sources of Revenue	Alberta Forecasts ($ Millions)	NADC Region NADC proportion indicators	2003 indices (%)	NADC contributions ($ Millions)
Income Tax				
Personal income tax	5,035	income	8.63	435
Corporate income tax	2,016	value added	17.59	355
Sub-total	7,051			789
Other Taxes				
School property tax	1,165	municipal school tax	9.56	111
Tobacco tax	624	population	9.38	59
Fuel tax	602	population	9.38	56
Freehold mineral rights tax	214	well counts	9.38	20
Insurance taxes	148	population	9.38	14
Hotel room tax	58	income	8.63	5
Sub-total	2,811	sub-total		265
Non-Renewable Resource Revenue				
Natural gas and by-products royalty	3,480	gas production	38.20	1,328
Crude oil royalty	502	conventional oil production	8.10	41
Synthetic crude oil and bitumen royalty	103	all to NADC Region	100.00	103
Coal royalty	11		0.00	0
Bonuses and sales of Crown leases	679	well counts	25.30	172
Rentals and fees	144	well counts	25.30	36
Royalty tax credit	-143	well counts	25.30	-36
Sub-total	4,776			1,643
Transfers from Government of Canada				
Canada Health and Social Transfer	1,613	population	9.38	151
2003 Health Accord	248			
Agriculture support programs	169	farm cash income	9.18	16
Labour market development	120	population	9.38	11
Other	236	population	9.38	22
Sub-total	2,386			200

Table 4.3 continued to the next page

Table 4.3 continued from the previous page

Net Income from Commercial Operations				
Lottery revenue	1,093	population		
Liquor revenue	546	population		
Alberta Treasury Branches	152	population		
Other	4	population		
Sub-total	1,795	population	9.38	168
Premiums, Fees and Licences				
Health care insurance premiums	913	population	9.38	86
Motor vehicle licences	262	population	9.38	25
Crop and hail insurance premiums	164	farm cash income	9.18	15
Timber rentals and fees	63	forest industry revenue	50.25	32
Land titles	36	population	9.38	3
Other	278	population	9.38	26
Sub-total	1,716			186
Investment Income				
Alberta Heritage Savings Trust Fund	426	population		
Alberta Capital Finance Authority	319	population		
Agriculture Financial Services Corporation	91	population		
Debt Retirement Account	45	population		
Alberta Sustainability Fund	31	population		
Endowment Funds Medical Research	31	population		
Science and Engineering Research	11	population		
Scholarship	10	population		
Other	55	population		
Sub-total	1019	population	9.38	96
Other				
Refunds of expense	87	population		
Fines and penalties	63	population		
Miscellaneous	224	population		
Sub-total	374	population	9.38	35
Total Revenue	21,928			3,382

Sources:
Revenues of the Alberta government are compiled from Alberta Revenue, *Alberta Budget*. They are revenue estimates in the 2003-2004 Alberta Budget.
NADC contributionis are estimated by GTS Group International.

Table 4.4
Estimates of the Contribution of the Northern Alberta Development Region to the Revenue of the Government of Alberta
Fiscal Year 2005-2006
($ Millions)

Type of revenue	Alberta Target ($ Millions)	NADC Region NADC proportion indicators	2005 indices (%)	NADC contributions ($ Millions)
Income tax				
Personal income tax	5,674	income	8.63	490
Corporate income tax	1,876	value added	17.59	330
Sub-total	7,550			820
Other taxes				
School property tax	1,304	municipal school tax	9.56	125
Tobacco tax	632	population	9.38	59
Fuel tax	618	population	9.38	58
Freehold mineral rights tax	150	well counts	9.38	14
Insurance taxes	166	population	9.38	16
Hotel room tax	65	income	8.63	6
Sub-total	2,935	sub-total		277
Non-Renewable Resource Revenue				
Natural gas and by-products royalty	2,408	gas production	38.20	919
Crude oil royalty	272	conventional oil production	8.10	22
Synthetic crude oil and bitumen royalty	141	all to NADC Region	100.00	141
Coal royalty	13		0.00	0
Bonuses and sales of Crown leases	541	well counts	25.30	137
Rentals and fees	138	well counts	25.30	35
Royalty tax credit	-125	well counts	25.30	-32
Sub-total	3,388			1,222
Transfers from Government of Canada				
Canada Health and Social Transfer	1,736	population	9.38	163
2003 Health Accord	447			
Agriculture support programs	116	farm cash income	9.18	11
Labour market development	118	population	9.38	11
Other	206	population	9.38	19
Sub-total	2,623			204

Table 4.4 continued to the next page

Table 4.4 continued from the previous page

Net Income from Commercial Operations				
Lottery revenue	1,203	population		
Liquor revenue	550	population		
Alberta Treasury Branches	176	population		
Other	5	population		
Sub-total	1,934	population	9.38	181
Premiums, Fees and Licences				
Health care insurance premiums	941	population	9.38	88
Motor vehicle licences	274	population		
Crop and hail insurance premiums	206	farm cash income	9.18	19
Timber rentals and fees	63	forest industry revenue	50.25	32
Land titles	35	population	9.38	3
Other	287	population	9.38	27
Sub-total	1,806			169
Investment Income				
Alberta Heritage Savings Trust Fund	723	population		
Alberta Capital Finance Authority	277	population		
Agriculture Financial Services Corporation	107	population		
Debt Retirement Account	-	population		
Alberta Sustainability Fund	85	population		
Endowment Funds: Medical Research	49	population		
Science and Engineering Research	31	population		
Scholarship	16	population		
Other	39	population		
Sub-total	1,327	population	9.38	124
Other				
Refunds of expense	87	population		
Fines and penalties	64	population		
Miscellaneous	231	population		
Sub-total	382	population	9.38	36
Total Revenue	21,945			3,033

Sources:
Revenues of the Alberta government are compiled from Alberta Revenue, *Alberta Budget*. They are targe revenues in the 2003-2004 Alberta Budget.
NADC contributionis are estimated by GTS Group International.

Table 4.5
Revenue of the Government of Alberta
($ Millions)

Fiscal year ending on March 31	1999	2000	2001	2002	2003	2004	2006
Albert Revenue definition of revenue	Actual	Actual	Actual	Actual	Forecast	Estimate	Target
Income Tax	6,260	6,355	5,966	6,412	7,267	7,051	7,550
Personal income tax	4,601	5,100	3,943	4,183	4,867	5,035	5,674
Corporate income tax	1,659	1,255	2,023	2,229	2,400	2,016	1,876
Other Taxes	2,296	2,369	2,538	2,563	2,727	2,811	2,935
Non-Renewable Resource Revenue	2,368	4,650	10,586	6,227	6,428	4,776	3,388
Transfers from Government of Canada	1,335	1,640	1,813	2,266	2,069	2,386	2,623
Investment Income	1,604	1,906	1,353	787	(119)	1,019	1,327
Net Income from Commercial Operations	1,386	1,573	1,636	1,694	1,849	1,795	1,934
Premiums, Fees and Licences	1,291	1,329	1,280	1,363	1,592	1,716	1,806
Other	342	350	425	614	762	374	382
Total Revenue	16,882	20,172	25,597	21,926	22,575	21,926	21,945

Source: Alberta Revenue, *Alberta Budget*.

Table 4.6
Contribution of the Northern Alberta Development Council Region to the Revenue of the Government of Alberta
($ Millions)

Fiscal year ending on March 31	1999	2000	2001	2002	2003	2004	2006
Income Tax	667	629	696	753	842	789	820
Personal income tax	382	440	340	361	420	435	490
Corporate income tax	285	189	356	392	422	355	330
Other Taxes	237	245	258	242	257	265	277
Non-Renewable Resource Revenue	835	1,760	4,021	2,132	2,086	1,643	1,222
Transfers from Government of Canada	122	150	161	212	194	200	204
Investment Income	146	174	123	74	(11)	96	124
Net Income from Commercial Operations	126	143	149	159	173	168	181
Premiums, Fees and Licences	151	163	139	134	149	186	169
Other	31	32	39	58	71	35	36
Total Revenue	2,315	3,296	5,586	3,764	3,761	3,383	3,033

Source: Estimates by GRS Group International

Table 4.7
Percentage of NADC Region's Contribution to the Revenue of the Government of Alberta

Fiscal year ending on March 31	1999	2000	2001	2002	2003	2004	2006
Income Tax	10.7	9.9	11.7	11.7	11.6	11.2	10.9
Personal income tax	8.3	8.6	8.6	8.6	8.6	8.6	8.6
Corporate income tax	17.2	15.1	17.6	17.6	17.6	17.6	17.6
Other Taxes	10.3	10.3	10.2	9.4	9.4	9.4	9.4
Non-Renewable Resource Revenue	35.3	37.8	38.0	34.2	32.5	34.4	36.1
Transfers from Government of Canada	9.1	9.1	8.9	9.4	9.4	8.4	7.8
Investment Income	9.1	9.1	9.1	9.4	9.2	9.4	9.3
Net Income from Commercial Operations	9.1	9.1	9.1	9.4	9.4	9.4	9.4
Premiums, Fees and Licences	11.7	12.3	10.9	9.8	9.4	10.8	9.4
Other	9.1	9.1	9.2	9.4	9.3	9.4	9.4
Total Revenue	13.7	16.3	21.8	17.2	16.7	15.4	13.8

Source: Estimates by GTS Group International.

Table 4.8
Federal Government Revenue in Alberta
($ millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Personal income tax	9,462	9,359	10,470	9,688	9,910	10,108	10,288	10,452	10,602	10,742	10,872
Corporate income tax	2,661	3,187	3,412	3,056	3,126	3,189	3,246	3,297	3,345	3,389	3,430
Withholding tax from non-residents	191	230	254	222	228	232	236	240	243	247	250
Contributions to social insurance plans	1,814	1,757	1,803	1,782	1,822	1,859	1,892	1,922	1,950	1,975	1,999
Indirect taxes	3,959	4,026	4,291	4,063	4,156	4,239	4,314	4,383	4,446	4,505	4,559
(of which Goods and Services Tax)	2,566	2,760	3,017	2,759	2,822	2,879	2,930	2,977	3,020	3,059	3,096
Other current transfers from persons	2	1	2	0	0	0	0	0	0	0	0
Investment income	525	566	678	583	596	608	619	629	638	646	654
Current transfers from provincial governments	34	33	32	33	34	34	35	36	36	37	37
Total revenue	18,648	19,159	20,942	19,430	19,875	20,273	20,633	20,962	21,264	21,544	21,805

Sources: Federal revenue from 1998 to 2000 is from Statistics Canada, *Provincial Economic Accounts*; Others are forecasts by GTS Group International

Table 4.9
Contribution of the Northern Alberta Development Council Region to the Revenue of the Federal Government
($ Millions)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Personal income tax	1,008	926	1,221	1,138	1,148	1,131	1,134	1,135	1,152	1,167	1,181
Corporate income tax	457	480	600	538	550	562	571	580	588	596	603
Withholding tax from non-residents	17	21	23	20	21	21	22	22	22	22	23
Contributions to social insurance plans	151	152	156	154	157	160	163	166	168	170	173
Indirect taxes	329	347	370	351	359	366	372	378	384	389	393
(of which Goods and Services Tax)	213	238	260	238	244	248	253	257	261	264	267
Other current transfers from persons	0	0	0	0	0	0	0	0	0	0	0
Investment income	48	52	62	53	54	55	56	57	58	59	60
Current transfers from provincial governments	3	3	3	3	3	3	3	3	3	3	3
Total revenue	2,227	2,219	2,696	2,494	2,536	2,547	2,575	2,599	2,636	2,671	2,703

Source: Estimates by GTS Group International

Table 4.10
NADC Region's Percentage of Alberta

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Personal income tax	10.7	9.9	11.7	11.7	11.6	11.2	11.0	10.9	10.9	10.9	10.9
Corporate income tax	17.2	15.1	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
Withholding tax from non-residents	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Contributions to social insurance plans	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Indirect taxes	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
(of which Goods and Services Tax)	8.3	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6
Other current transfers from persons	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Investment income	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Current transfers from provincial governments	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Total revenue	11.9	11.6	12.9	12.8	12.8	12.6	12.5	12.4	12.4	12.4	12.4

Sources: Federal revenue from 1998 to 2000 is from *Statistics Canada, Provincial Economic Accounts* ; Others are forecasts by GTS Group International

Table 5.1
Average and Total Earnings in the Northern Alberta Development Council Region and Alberta, 1996

	NADC Region	The Rest of Alberta	Alberta	NADC as % of Alberta
All persons with earnings (counts)	139,700	1,359,740	1,499,440	9.3
Average earnings (all persons with earnings, $)	26,468	26,105	26,138	101.3
Total earnings (all persons with earnings, $ millions)	3,698	35,495	39,193	9.4
Worked full year, full time (counts)	68,000	684,570	752,570	9.0
Average earnings (worked full year, full time, $)	37,959	37,076	37,156	102.2
Total earnings (worked full year, full time, $ millions)	2,581	25,381	27,962	9.2

Source: Compiled from Statistics Canada, *1996 Census Community Profiles*

Table 5.2
Average and Total Earnings in the Northern Alberta Development Council Region and Alberta, 2001

	NADC Region	The Rest of Alberta	Alberta	NADC as % of Alberta
All persons with earnings (counts)	153,640	1,614,800	1,768,440	8.7
Average earnings (all persons with earnings, $)	32,392	32,623	32,603	99.4
Total earnings (all persons with earnings, $ millions)	4,977	52,680	57,656	8.6
Worked full year, full time (counts)	77,150	847,770	924,920	8.3
Average earnings (worked full year, full time, $)	43,922	44,094	44,080	99.6
Total earnings (worked full year, full time, $ millions)	3,389	37,382	40,770	8.3

Sources: Compiled from Statistics Canada, *2001 Census Community Profiles*

Table 5.3
Estimates of Total Employment Earnings in the Northern Alberta Development Council Region
($ Millions)

Year	Employment earnings
1996	3,698
1997	3,936
1998	4,258
1999	4,410
2000	4,875
2001	4,977
2002	5,043
2003	5,242
2004	5,441
2005	5,640
2006	5,839
2007	6,038
2008	6,237

Sources:
1996 and 2001 are actual numbers compiled from 1996 and 2001 Census of Canada.
Others are estimates and forecasts prepared by GTS Group International.

Table 6.1
Manufacturing Industries in the Northern Development Council Region and Alberta

	Units of Measurement	1998		1999	
		Alberta	NADC Region	Alberta	NADC Region
Number of establishments	Counts	2,629	147	2,481	132
Production and related workers					
Number of workers	Counts	92,280	6,321	89,685	6,210
Person hours paid	Thousands	196,024	13,542	188,889	13,321
Wages and salaries	$ Millions	3,207	289	3,106	295
Cost of fuel and electricity	$ Millions	770	89	884	98
Cost of materials and supplies used	$ Millions	19,468	1,106	21,240	1,095
Value of shipments of goods of own manufacturing	$ Millions	32,841	2,219	34,823	2,397
Value added	$ Millions	12,571	1,025	13,415	1,211
Administrative, office and other non-manufacturing employees					
Number of workers	Counts	24,215	1,126	23,618	1,059
Salaries and wages	$ Millions	1,342	67	1,334	69
Total employees					
Number	Counts	116,495	7,447	113,303	7,269
Salaries and wages	$ Millions	45,490	3,562	44,396	3,641
Cost of materials, supplies and goods for resales	$ Millions	22,214	1,152	24,104	1,126
Value of shipments and other revenues	$ Millions	36,239	2,261	38,531	2,425
Value added	$ Millions	13,588	1,020	14,282	1,209

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

Table 6.2
Forest Products Industries as a Pecentage of
All Manufacturing Industries in the Northern Alberta Development Council Region

		1998		
	Units of Measurement	All manufacturing industries in NADC	Forest products industries	Forest products industries as % of all
Number of establishments	Counts	147	31	21.1
Production and related workers				
Number of workers	Counts	6,321	3,732	59.0
Person hours paid	Thousands	13,542	13,543	60.6
Wages and salaries	$ Millions	289	179	61.8
Cost of fuel and electricity	$ Millions	89	67	74.9
Cost of materials and supplies used	$ Millions	1,106	682	61.7
Value of shipments of goods of own manufacturing	$ Millions	2,219	1,411	63.6
Value added	$ Millions	1,025	659	64.3
Administrative, office and other non-manufacturing employees				
Number of workers	Counts	1,126	516	45.8
Salaries and wages	$ Millions	67	31	45.8
Total employees				
Number	Counts	7,447	4,248	57.0
Salaries and wages	$ Millions	356	209	58.8
Cost of materials, supplies and goods for resales	$ Millions	1,152	693	60.1
Value of shipments and other revenues	$ Millions	2,261	1,417	62.7
Value added	$ Millions	1,020	654	64.1

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

Table 6.3
Forest Products Industries as a Percentage of
All Manufacturing Industries in the Northern Alberta Development Council Region

		1999		
	Units of Measurement	All manufacturing industries in NADC	Forest products industries	Forest products industries as % of all
Number of establishments	Counts	132	29	22.0
Production and related workers				
Number of workers	Counts	6,210	2893	46.6
Person hours paid	Thousands	13,321	6306	47.3
Wages and salaries	$ Millions	295	144	48.9
Cost of fuel and electricity	$ Millions	98	68	68.9
Cost of materials and supplies used	$ Millions	1,095	501	45.8
Value of shipments of goods of own manufacturing	$ Millions	2,397	1,204	50.2
Value added	$ Millions	1,211	642	53.1
Administrative, office and other non-manufacturing employees				
Number of workers	Counts	1,059	385	36.4
Salaries and wages	$ Millions	69	26	38.2
Total employees				
Number	Counts	7,269	3278	45.1
Salaries and wages	$ Millions	364	171	46.9
Cost of materials, supplies and goods for resales	$ Millions	1,126	503	44.7
Value of shipments and other revenues	$ Millions	2,425	1,206	49.7
Value added	$ Millions	1,209	641	53.1

Source: Compiled from a special tabulation of Statistics Canada, *Manufacturing Industries of Canada*

Table 6.4
Distribution of Investment Expenditures between Construction and Machinery and Equipment Expenditures by Industry, 2003

Industry group	Value of investment ($ Millions)			% of total	
	Construction	Machinery and equipment	Total	Construction	Machinery and equipment
Agriculture	203	867	1,071	19.0	81.0
Oil and gas extraction	12,467	3,885	16,352	76.2	23.8
Manufacturing	167	1,042	1,209	13.8	86.2
All other industries	12,350	8,290	20,640	59.8	40.2
Total	25,187	14,084	39,271	64.1	35.9

Source: Compiled from *Private and Public Investment in Canada*.

Table 6.5
Estimates of Value of Machinery and Equipment Purchased by Location for Investment in the Northern Alberta Development Council Region
($ Millions)

	1998	1999	2000	2001	2002	2003
Total value of investment	5,960	6,168	9,078	11,458	11,887	10,862
Expenditures on machinery and equipment	1,813	1,836	2,564	3,139	3,252	3,001
Purchase by location						
Alberta	293	296	414	506	525	484
Rest of Canada	147	149	207	254	263	243
Rest of World	1,374	1,391	1,943	2,378	2,464	2,274

Source: Estimates by GTS Group International

Table 6.6
Forecasts of Demand for Construction Materials and Labour and Machinery and Equipment in Alberta from Investment in the Northern Alberta Development Council Region
($ Millions)

	2004	2005	2006	2007	2008
Total investment	11,401	11,599	11,771	11,923	12,059
Construction expenditures per $1 of investment	0.718	0.718	0.718	0.718	0.718
Machinery and equipment expenditures per $ 1 of investment	0.282	0.282	0.282	0.282	0.282
Construction expenditures	8,186	8,328	8,452	8,561	8,658
Machinery and equipment expenditures	3,215	3,271	3,320	3,362	3,401

Source: Estimates by GTS Group International

Table 7.1
Relative Economic Contribution of the Northern Alberta Development Council Region to Alberta and Canada

	Year	Percentage shares (%)			Value per person ($)		
		NADC Region	Rest of Alberta	Alberta	NADC Region	Rest of Alberta	Alberta
International exports	2002	32.7	67.3	100.0	57,304	12,203	16,434
Interprovincial exports	2001	24.8	75.2	100.0	19,436	6,086	7,338
Investment	2002	28.6	71.4	100.0	42,401	10,936	13,888
Revenue of Alberta government	2003*	16.7	83.3	100.0	15,292	6,754	7,555
Revenue of federal government	2000	12.9	87.1	100.0	9,903	7,015	7,288

Sources: Alberta statistics are actual and others are estimates by GTS Group International
The NADC Region shared 9.2% of Alberta population in 2002.
*The year ending March 31, 2003

Table 7.1
Estimates of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Economic Contributions	Year	Total Contributions ($ Billions)			Value Per Person ($ Thousands)		
		NADC Region	Rest of Alberta	NADC as % of Alberta	NADC Region	Rest of Alberta	Alberta Average
International exports	2002	16.1	33.0	32.7	57.3	12.2	16.4
Interprovincial exports	2001	5.3	16.0	24.8	19.4	6.1	7.3
Investment	2002	11.9	29.6	28.6	42.4	10.9	13.9
Revenue of Alberta government	2003*	3.8	18.8	16.7	13.4	6.9	7.6
Revenue of federal government	2000	2.7	18.2	12.9	9.9	7.0	7.3

Sources: Alberta statistics are actual and others are estimates by GTS Group International
* The year ending March 31, 2003.

Table 7.2
Forecasts of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Economic Contributions	Year	Total Contributions ($ Billions)			Value Per Person ($ Thousands)		
		NADC Region	Rest of Alberta	NADC as % of Alberta	NADC Region	Rest of Alberta	Alberta Average
International exports	2008	18.9	38.1	33.1	62.2	13.0	17.6
Interprovincial exports	2008	4.9	14.5	25.4	16.3	4.9	6.0
Investment	2008	12.1	31.5	27.7	39.8	10.8	13.5
Revenue of Alberta government	2006*	3.2	18.8	14.4	10.4	6.7	7.0
Revenue of federal government	2008	2.7	19.1	12.4	8.9	6.5	6.8

Sources: Alberta statistics are actual and others are estimates by GTS Group International
*The year ending March 31, 2006.

Appendix B: Data Sources and Methods

Page Number in Appendix A

People and Industry

Table 1.1 1
Alberta Population in the Northern Alberta Development Region Communities and All Communities in Alberta As Reported in Municipal Profiles

The Northern Alberta Development Council Region includes all communities in the following municipalities:

In Census Division No. 12:

M.D. of Bonnyville No. 87
Lakeland County
County of St. Paul No. 19

In Census Division No. 13:

Woodlands County,
Athabasca County No. 12,

In Census Division No. 16:

I.D. 24 (Wood Buffalo National Park),
Regional Municipality of Wood Buffalo

In Census Division No. 17:

MD of Big Lakes,
M.D. of Opportunity No. 17
M.D. of Lesser Slave River No. 124
M.D. of Clear Hills No. 21
M.D. of Northern Lights No. 22
M.D. of Mackenzie No. 23
Northern Sunrise County (was M.D. of East Peace No. 131)

In Census Division No. 18:

M.D. of Greenview No. 16,

In Census Division No. 19:

Grande Prairie County No. 1
M.D. of Smoky River N0. 130
M.D. of Birch Hills No. 19
M.D. of Spirit River No. 133
M.D. of Saddle Hills No. 20
M.D. of Fairview No. 136
M.D. of Peace No. 135

- The above definition of the Northern Alberta Development Council Region was applied to Alberta Municipal Affairs, *Municipal Profiles*, to compile population in the NADC Region and Alberta.

Table 1.2 2
Total Gross Farm Receipts in the Northern Alberta Development Council Region and Alberta in 2000

- Statistics Canada's *2001 Census of Agriculture*, was used to compile agricultural statistics for the NADC Region.
- The same data source and method were applied to Table 1.3 to Table 1.5.

Table 1.3 2
Acres of Field Crops Grown in the Northern Alberta Development Region and Alberta, 2001

Table 1.4 3
Alfalfa and Canola Grown in the Northern Alberta Development Council Region and Alberta, 2001

Table 1.5 3
Cattle and Calves in the Northern Alberta Development Council Region and Alberta, 2001

Table 1.6 4
Annual Production of Oil, Gas, and Condensate in Alberta

- Alberta Energy compiled monthly statistics on the number of active wells, production volume of oil, natural gas, and natural gas condensates in the NADC Region and Alberta. From these monthly statistics, we calculated the annual statistics for the NADC Region and Alberta.
- The same data source and method were applied to Table 1.7 and Table 1.8.

Table 1.7 5
Annual Production of Oil, Gas, and Condensate in the Northern Alberta Development Council Region

Table 1.8 6
Annual Production of Oil, Gas, and Condensate - The Northern Alberta Development Council Region as a Percentage of Alberta

Table 1.9 7
Manufacturing Industries in the Northern Development Council Region and Alberta

- We asked Statistics Canada to compile a special tabulation of *Manufacturing Industries of Canada: National and Provincial Areas* for the NADC Region for 1998 and 1999 (the latest years for which such tabulation can be compiled).
- Statistics for the NADC Region and Alberta in Table 1.9 to Table 1.12 were compiled from this special tabulation.

Table 1.10 8
Manufacturing Industries in the Northern Development Council Region and Alberta: Percentage of the NADC Region in Alberta

Table 1.11 9
Forest Products Industries as a Percentage of All Manufacturing Industries in the Northern Alberta Economic Development Council Region, 1998

Table 1.12 10
Forest Products Industries as a Percentage of All Manufacturing Industries in the Northern Alberta Development Council Region, 1999

Table 1.13 11
Labour Force by Industry in the Northern Alberta Development Council Region and Alberta, 2001

- We used the *2001 Census of Canada* to compile the labour force by industry for the NADC Region.

Table 1.14 11
Percentage Distribution of Labour Force by Industry, 2001

- This table was calculated from the data in Table 1.13.

Trade

Table 2.1 12
Alberta's Trade Balance

- We compiled Alberta's trade balance from Alberta Revenue, *Alberta Economic Accounts 2001*.
- The same data source was used to compile Table 2.2.

Table 2.2 13
Alberta's Total Out-of-Province Exports

Table 2.3 14
Alberta Exports by Industry, 1996 to 2002

- We used Alberta Economic Development, *Alberta International Trade Review 2001* for the data from 1996 to 2001, and *Alberta International Trade Review, January to December 2002*, for 2002 data.

Table 2.4 15
International Exports of Major Primary Agricultural Products

- We estimated the value of crop exports from the NADC Region by applying the NADC Region's percentage of the acres of crops grown in Alberta to the value of Alberta exports of crop. For livestock, we applied the NADC percentage of the head of livestock to the value of Alberta exports of livestock.

- We extensively used the method of estimating the NADC Region's contribution to Alberta's total by applying the NADC Region's percentage of Alberta's total of another variable that was closely associated with the first variable.

- For example, Alberta exported $126 millions of barley in 2001.
- The NADC Region had 40.5% of the acres of barley grown in Alberta in 2000.
- We multiplied 40.5% to $12、millions to get $51.3 millions, which was our estimate of the value of barley exported from the NADC Region.

- We call the NADC Region's percentage of Alberta's total a regional proportion indicator.

Table 2.5 16
Forecasts of International Exports of Major Primary Agricultural Products

- We used "International exports in 1997 constant dollars," from Alberta Revenue's *Alberta Economic Accounts* as the base for forecasting Alberta's international exports. This table has the following groups of products:

Animals
Minerals
  Oil
  Gas
  Coal
  Other
Manufacturing
Services
Total

- For each of the above groups except Services and Total, the past trend from 1990 to 2001 was extended to the forecasting period by using either a linear or logarithmic regression. Then, the forecasts were adjusted for 2001 constant dollars.

- Forecasts for the NADC Region were obtained by applying regional proportion indicators:

Animals: head of animals
Oil: oil production
Gas: gas production
Manufacturing: value of shipments

Table 2.6 17
International Exports of Major Primary Energy Products

- We compiled Alberta's value of exports from Alberta Economic Development's *Alberta International Trade Review*. The value of exports from the NADC Region were estimated by using the following regional proportion indicators:

Natural gas: the annual volume of production in the NADC Region
Crude petroleum: the annual volume of production in the NADC Region
Petroleum gasses, liquefied: the annual volume of production in the NADC Region

Table 2.7 18
Forecasts of International Exports of Major Primary Energy Products

- To eliminate the impact of price fluctuations from a trend in the value of exports, we used the value of exports of primary energy products in 1997 constant dollars from

Alberta Revenue's *Alberta Economic Accounts*. The trend in the value of exports from 1990 to 2001 was extended to the forecasting period by either a linear or logarithmic regression line.

- The value of exports from the NADC Region was forecasted by using the same regional proportion indicators as those used for Table 2.6. The NADC Region's percentages of gas and oil from 2003 to 2008 were, however, forecasted by extending the trends from 1998 to 2002 to the forecasting period. The NADC Region's percentage of liquefied natural gassed did not exhibit any stable pattern from 1998 to 2002. Therefore, we used the average percentage from 1998 to 2002 for the forecasts from 2003 to 2008.

Table 2.8 19
International Exports of Major Forest Products

- The regional proportion indicators were production capacity of forest products industries in the NADC Region from Alberta Forest Products Association, *Alberta Forest Products Industries – Overview of Economic Impact*, November 2001.

Table 2.9 20
Forecasts of International Exports of Paper, Pulp and Wood Products

- For Alberta, the trend in the value of exports from 1996 to 2002 was extended to the forecasting period.

- For the NADC Region, we used the production capacity of forest products in the NADC Region as a regional proportion indicator.

Table 2.10 21
Interprovincial Trade of Oil and Natural Gas

- The data for Alberta from 1998 to 2001 was compiled from Alberta Revenue's *Alberta Economic Accounts*. For the exports from the NADC Region, the regional proportion indicators used for international exports were used.

Table 2.11 22
Forecasts of Interprovincial Trade of Oil and Gas

- We forecasted the total exports from Alberta by extending the past trends from 1998 to 2001 in constant 1997 dollars into the forecasting period. Then, we applied the regional proportion indicators for oil and gas to forecast the exports from the NADC Region.

Table 2.12 23
International Exports from the Northern Alberta Development Council Region for Selected Years

- This is a summary table of statistics from other tables.

Table 2.13 24
Interprovincial Exports of Goods from the Northern Alberta Development Council Region

- This is a summary table of statistics from other tables.

Investment

Table 3.1 25
All Projects with More Than $2 Million Expenditures

- The data was compiled from Alberta Economic Development, *Inventory of Major Alberta Projects May 2003* by identifying all investment projects that had locations within the Northern Alberta Economic Development Region.

- The same data source and method were used for Table 3.2 to Table 3.4.

Table 3.2 26
Large-Scale Projects with More Than $100 Million Expenditures

Table 3.3 27
Projects with More Than $2 Million Expenditures Either Completed in 2002 or Currently Under Construction

Table 3.4 28
Major Capital Investment Projects in the Northern Alberta Development Council Region and Alberta as of May 2003: Projects with More Than $100 Million Expenditures That have Been Either Announced or Proposed

Table 3.5 29
Estimates of Total Investment in 2003 and Beyond for Selected Industries Including Projects Under-construction, Announced and Proposed

- For each project that has a starting year and an ending year, we assumed that the total value of investment expenditures would be spend in an equal proportion and allocated the total value of investment expenditures to each year during the construction of the project.

- Then, we summed up the annual value of investment expenditures in 2003 and beyond.

Table 3.6 30
Estimates of Total Investment in 2003 and Beyond for Selected Industries Including Proposed Projects Only

- The same data source and method for Table 3.5 were applied.

Table 3.7 31
Private and Public Investment in Alberta

- The data was compiled from Statistics Canada's *Private and Public Investment in Canada*.

Table 3.8 32
Capital Expenditure Intentions in Alberta, 2003: Distribution between Construction and Machinery and Equipment Expenditures

- We compiled the data from Statistics Canada's Private and Public Investment n Canada and calculated the percentage distribution of investment expenditures between construction, and machinery and equipment.

Table 3.9 33
Capital Investment in Alberta

- To estimate the value of investment in the NADC Region, we grouped industries in *Private and Public Investment in Canada* into:

Agriculture
Oil sands
Conventional oil and gas
Manufacturing
All other industries

- For investment in oilsands and conventional oil and gas, we used data from Alberta Energy, *Alberta – A World Energy Centre*, listed the value of investment in oilsands, and conventional oil and gas exploration separately for 1992 to 2001.

- The regional proportion factors that were used for estimating investment in the NADC Region were:

Agriculture:	farm cash receipts
Oil sands:	all are in the NADC Region
Conventional oil and gas:	well counts
Manufacturing:	value of shipments in all manufacturing industries
All other industries:	population

Table 3.10 34
Forecasts of Capital Investment in Alberta

- To forecast total investment in Alberta, we used "Gross Capital Formation in 1997 Constant Dollars," in Alberta Revenue's *Alberta Economic Accounts 2001*. The data in this table was compiled from the same original database that was used for Statistics Canada, *Private and Public Investment in Canada*. But the data is presented in 1997 constant dollars.

- The data in "Gross Capital Formation in 1997 Constant Dollars" was available for the following categories:

Government
Business
  Residential
  Non-residential
Total

- We reconciled the categories in the "Gross Capital Formation" and the industries in Private and Public Investment in Canada as follows:

"Government" includes:
"Waste services", "education services", "health care and social assistance services", and "public administration."

"Business – residential" includes "housing."
"Business – non-residential" includes all other industries.
"Total"

- For "Government", "Business – residential", and "Total," we extended the trend in "Gross Capital Formation" from 1990 to 2001 to the forecasting period by either a linear or logarithmic regression line. Forecasts were then adjusted for 2001 constant dollars.

- Forecasts for "Business – non-residential" were calculated as a difference between "Total" and "Government + Business – residential."

- A forecast for the NADC Region was made by applying the average of the NADC Region's percentage for each category of investment from 1998 to 2003 to the corresponding Alberta forecast.

Table 3.11 35
Inventory of Alberta Major Projects as of May 2003: Projects Under Construction

- We compiled this summary table from Alberta Economic Development's Inventory of Major Alberta Projects May 2003.

- The same data source was used for Table 3.12 to Table 3.14.

Table 3.12 36
Inventory of Alberta Major Projects as of May 2003 Projects Completed, Under Construction or Announced

Table 3.13 37
Inventory of Alberta Major Projects: Completed, Under-construction, or Announced in 2003

- For all investment projects in Alberta Economic Development's Inventory of Major Alberta Projects, we grouped them according to the starting and ending year of the project.

- The same data source and method was used for Table 3.14.

Table 3.14 38
Inventory of Alberta Major Projects Completed, Under-construction, or Announced in 2003

Government Revenue

Table 4.1 39
Revenue of Local Government in Alberta for 1999, 2000, and 2001

- The data from Alberta Municipal Affairs, *Municipal Profiles*, were compiled for all municipal governments in the NADC Region and for all municipal governments in Alberta.

Table 4.2 40
Estimates of the Contribution of the Northern Alberta Development Council Region to the Revenue of the Government of Alberta: Fiscal Year 1998-1999

- A regional proportion indicator is listed for each category of revenue in the table.

- Corporate income tax is an important component of the revenue of the Government of Alberta. We used value added by industry (it is also called as Gross Domestic Product by industry) as a regional proportion indicator.

- Gross Domestic Product by industry is available for Alberta as a whole from Alberta Revenue, *Alberta Economic Accounts*. We grouped industries into: oil and gas, manufacturing, and all others and estimated value added by industry in the NADC Region for 1998 to 2001. The regional proportion indicators used for this estimation were:

- Manufacturing:Actual value added by manufacturing industries from Statistics Canada's *Manufacturing Industries of Canada*.
- All other industries: population
- Oil and gas: a weighted average of crude oil and natural gas production.

- The percentage of value added in the NADC Region out of Alberta total was:

1998:	13.8%
1999:	15.1%
2000:	17.6%
2001:	17.9%

- The same data source and method was used for Table 4.3 and Table 4.4.

Table 4.3 42
Estimates of the Contribution of the Northern Alberta Development Council Region to the Revenue of the Government of Alberta: Fiscal Year 2003-2004

Table 4.4 44
Estimates of the Contribution of the Northern Alberta Development Region to the Revenue of the Government of Alberta: Fiscal Year 2005-2006

Table 4.5 46
Revenue of the Government of Alberta

- This is a summary table from Table 4.2 to Table 4.4 and similar tables for other fiscal years.

Table 4.6 45
Contribution of the Northern Alberta Development Council to the Revenue of the Government of Alberta

- This is a summary table from Table 4.2 to Table 4.4 and similar tables for other fiscal years.

Table 4.7 47
Percentage of NADC Region's Contribution to the Revenue of the Government of Alberta

- This table was derived from Table 4.5 and Table 4.6.

Table 4.8 49
Federal Government Revenue in Alberta

- This table was compiled from Statistics Canada's Provincial Economic Accounts.

Table 4.9 49
Contribution of the Northern Alberta Development Council Region to the Revenue of the Federal Government

- The regional proportion indicators were:

Personal income tax:	employment earnings
Corporate income tax:	value added
Withholding tax:	population
Contribution to social insurance plans:	employment earnings
Indirect taxes:	employment earnings
Other:	employment earnings

- We forecasted total revenue by extending the trend from 1993 to1999 into the forecasting period. Then, each component was forecast by applying the average percentage of the component out of the total revenue from 1998 to 2000. The contribution by the NADC Region was forecast for each category by applying the same regional proportion indicator used for the estimates from 1998 to 2000.

Table 4.10 49
Contribution of the Northern Alberta Development Council Region to the Revenue of the Federal Government :NADC region's percentage of Alberta

- This table was derived from Table 4.9.

Employment Earnings

Table 5.1 50
Average and Total Earnings in the Northern Alberta Development Council Region and Alberta, 1996

We compiled statistics in this table from *the 1996 Census of Canada* by identifying all communities in the NADC Region.

Table 5.2 50
Average and Total Earnings in the Northern Alberta Development Council Region and Alberta, 2001

We compiled statistics in this table from Statistics Canada's *2001 Community Profiles* that were based on *the 2001 Census of Canada*.

Table 5.3 51
Estimates of Total Employment Earnings in the Northern Alberta Development Council Region

- Total employment earnings for Alberta from the *1996 and 2001 Census* were very close to "Wages and Salaries" from Alberta Revenue's *Alberta Economic Accounts*. We estimated employment earnings in the NADC Region for 1998 and 1999 by

applying the average percentage of total employment earnings in the NADC Region in 1996 and 2001 to wages and salaries in Alberta.

- We forecast total wages and salaries in Alberta by extending the trend from 1996 to 2001 to the forecasting period. Employment earnings in the NADC region were forecast by using the same regional proportion indicator used for the estimates for 1998 and 1999.

Materials and Supplies Purchased for Production and Investment

Table 6.1 52
Manufacturing Industries in the Northern Development Council Region and Alberta

- The data was compiled from Statistics Canada, *Manufacturing Industries of Canada: National and Provincial Areas*.

Table 6.2 52
Forest Products Industries as a Percentage of All Manufacturing Industries in the Northern Alberta Economic Development Region

- The data was compiled from Statistics Canada, *Manufacturing Industries of Canada: National and Provincial Areas*.

Table 6.3 54
Forest Products Industries as a Percentage of All Manufacturing Industries in the Northern Alberta Development Council Region

- The data was compiled from Statistics Canada, *Manufacturing Industries of Canada: National and Provincial Areas*.

Table 6.4 55
Distribution of Investment Expenditures between Construction and Machinery and Equipment Expenditures by Industry, 2003

- The data was compiled from *Private and Public Investment in Canada*.

Table 6.5 56
Estimates of Value of Machinery and Equipment Purchased by Location for Investment in the Northern Alberta Development Council Region

- The percentage of investment expenditures spent on machinery and equipment was applied to the value of investment by industry in the NADC Region to estimate the value of machinery and equipment purchased by investment in the NADC Region. This estimate was, then, allocated to the three locations of purchase; Alberta, the rest of Alberta, and the rest of world by using the percentage of purchase by location from "Alberta Commodity Supply Ratio" from Alberta Revenue, *Alberta Economic Multipliers 1998*.

Table 6.6 57
Forecasts of Demand for Construction Materials and Labour and Machinery and Equipment in Alberta from Investment in the Northern Alberta Development Council Region

- The data source and method for Table 6.5 was used.

Summary Indicators

Table 7.1 58
Relative Economic Contribution of the Northern Alberta Development Council Region to Alberta and Canada

- These statistics were chose from several tables above. The per capita statistics were calculated by using the total number of people in the NADC Region and Alberta from Alberta Municipal Affairs' *Municipal Profiles*.

Table 7.2 59
Estimates of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

- These statistics were chosen from several tables above.

Table 7.3 60
Forecasts of Economic Contribution of the Northern Alberta Development Council Region for Selected Years

Population used for this table was forecast as follows:

- Average annual population growth rates for the NADC Region and the rest of Alberta were calculated from the medium projections of Alberta Population Projections by Census Divisions 1999-2006 (Alberta Treasury, 1999) from 2002 to 2005 (1.31% for the NADC Region and 1.30% for the rest of Alberta) and from 2002 to 2008 (1.39% for the NADC Region and 1.42% for the rest of Alberta).

- These annual growth rates were applied to the number of population in the NADC Region and the rest of Alberta in 2002 that were compiled from Alberta Municipal Affairs' Municipal Profiles.

Population Projections (Persons)

	2005	2008
NADC Region	292,230	303,180
Rest of Alberta	2,824,483	2,926,552
Alberta	3,116,714	3,229,732